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PACIFIC NORTHWEST RIVER BASINS COMMISSION VANCOUVER WASH F/G 8/6
COLUMBIA-NORTH PACIFIC REGION COMPREHENSIVE FRAMEWORK STUDY OF --ETC(U)
MAR 70 E L WHITE, G J GRONEWALD, H H RALPHS

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Columbia-North Pacific Region Comprehensive Framework Study

APPENDIX

III
LEGAL &
ADMINISTRATIVE
BACKGROUND

ADA036551



Columbia-North Pacific Region


Comprehensive Framework Study
of Water and Related Lands

APPENDIX



LEGAL & ADMINISTRATIVE BACKGROUND



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PACIFIC NORTHWEST RIVER BASINS COMMISSION
1 COLUMBIA RIVER, VANCOUVER, WASHINGTON

MARCH 1970

This appendix is one of a series making up the complete Columbia-North Pacific Region Framework Study on water and related lands. The results of the study are contained in the several documents as shown below:

Main Report

Summary Report

Appendices

- | | |
|-----------------------------------------------|----------------------------------------------|
| I. History of Study | IX. Irrigation |
| II. The Region | X. Navigation |
| III. Legal & Administrative Background | XI. Municipal & Indus- trial Water Supply |
| IV. Land & Mineral Resources | XII. Water Quality & Pollution Control |
| V. Water Resources | XIII. Recreation |
| VI. Economic Base & Projections | XIV. Fish & Wildlife |
| VII. Flood Control | XV. Electric Power |
| VIII. Land Measures & Watershed Protection | XVI. Comprehensive Frame- work Plans |

Pacific Northwest River Basins Commission
1 Columbia River
Vancouver, Washington

Legal & Administrative Background

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APPENDIX III

Columbia-North Pacific Region
Comprehensive Framework Study

of Water and Related Lands. Appendix III.
Legal and Administrative Background,

E. L./White, G. J./Gronewald,
H. H./Ralphs G. E./Van Santen

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The sections (or parts) on Federal agencies and State law were
prepared by the respective agency or state concerned.

This appendix to the Columbia-North Pacific Region Framework Report was prepared at field level under the auspices of the Pacific Northwest River Basins Commission. It is subject to review by the interested Federal agencies at the departmental level, by the Governors of the affected States, and by the Water Resources Council prior to its transmittal to the President of the United States for his review and ultimate transmittal to the Congress for its consideration.

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CONTENTS :

APPENDIX III LEGAL & ADMINISTRATIVE BACKGROUND --

| | Page No. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| FEDERAL LAWS, POLICIES, AND ADMINISTRATION | 1 |
| The Federal Constitution and Water Resource | 1 |
| Development | 1 |
| Commerce Clause. | 2 |
| Property Clause. | 3 |
| General Welfare Clause | 3 |
| Treaty Clause. | 3 |
| Congressional Legislation | 4 |
| Historical Background. | 4 |
| Existing Legislation | 9 |
| Bibliography. | 31 |
| Treaties and Compacts | 43 |
| Treaty with the United Kingdom, June 15, 1846, 9 St. 869, 18 Stat. Part 2, 329, Settling the Northern Boundary of the United States West of the Rocky Mountains. | 43 |
| Boundary Waters Treaty with the United Kingdom (Dominion of Canada), January 11, 1909, 36 Stat. 2448, TS No. 548. | 44 |
| Treaty with Canada Relating to Cooperative Development of the Water Resources of the Columbia River Basin, January 17, 1961, 15 (2) USTI 1553 | 45 |
| Treaties with Pacific Northwest Indian Tribes 1853-1864. | 47 |
| Snake River Compact (1949) | 49 |
| Klamath River Basin Compact (1957) | 50 |
| Columbia Interstate Compact (Unperfected). | 50 |
| The Columbia River Fish Compact, Oregon- Washington (1915). | 50 |
| Pacific Marine Fisheries Commission Compact (1947) | 51 |
| Federal Agencies. | 52 |
| Department of Agriculture. | 52 |
| Department of the Army | 66 |
| Department of Commerce | 75 |
| Federal Power Commission | 80 |
| Department of Health, Education, and Welfare | 85 |
| Department of Housing and Urban Development. | 89 |
| Department of the Interior | 91 |
| The International Joint Commission--United States and Canada. | 119 |
| Department of Labor. | 121 |
| Department of Transportation | 122 |

CONTENTS

| | <u>Page No.</u> |
|-----------------------------------------------------------|-----------------|
| cont. → STATE LAW, POLICIES, AND ADMINISTRATION | 123 |
| Introduction | 123 |
| Idaho. | 125 |
| State Water Law | 125 |
| Administrative Structure. | 144 |
| State Water Policy. | 151 |
| Montana. | 153 |
| Basic Water Laws of Montana | 153 |
| Water Districts | 158 |
| Weather Modification. | 161 |
| Compacts and Treaties | 162 |
| Water Pollution | 165 |
| Nevada | 167 |
| State Water Law | 167 |
| Administrative Structure. | 180 |
| State Water Policy. | 189 |
| Oregon | 197 |
| State Water Law | 197 |
| Water Rights. | 203 |
| State Programs. | 206 |
| Utah | 209 |
| Introduction. | 209 |
| Water Rights. | 209 |
| Administrative. | 217 |
| Washington | 221 |
| State Law | 221 |
| State Cases and Statutes. | 225 |
| State Department and Agencies | 229 |
| Water Resource Policy | 261 |
| Wyoming. | 281 |
| Administration of Water Rights. | 281 |
| Obtaining a Water Right | 284 |
| Extent of a Water Right | 287 |
| Abandonment of a Water Right. | 291 |
| Interstate Waters | 292 |

**Laws,
Policies &
Administration**

FEDERAL LAWS, POLICIES, AND ADMINISTRATION

All legal and administrative authority of the Federal Government is founded on the Constitution of the United States. For the most part, Federal laws relating to water resources are based on four clauses in the Constitution--Commerce, Property, General Welfare, and Treaty. Over the years these clauses have been interpreted to cover such functions as navigation, power, public lands, flood control, irrigation, drainage, water supply, fish and wildlife preservation, recreation, shore protection, sediment and salinity control, pollution control, basic data collection, and others.

Initially the laws and policies that were developed pertained to single purposes or functions; but, in response to public demand, they became all inclusive or comprehensive. However, as a result of the piecemeal development of this body of law, there is not today a single Federal policy for the comprehensive development of water and related land resources.

The increased demand for comprehensive development has required broader planning and projects needing rather vast capital investments. Consequently, over the years the Federal Government has assumed increasing responsibility in the development, utilization, and conservation of water and related land resources. This growth has been particularly noteworthy during the period since 1933.

THE FEDERAL CONSTITUTION AND WATER RESOURCE DEVELOPMENT

The Constitution of the United States provides the Federal Government with a broad array of authorities relating to water and land resource development. However, these authorities are limited to those powers expressly delegated and such as may reasonably be implied from those granted.^{1/} All other powers are reserved to the states or the people. Therefore, enabling authority for Federal undertakings must be found in the constitutional powers conferred by the people.^{(190)2/} This authority is founded on the constitutional clauses on Commerce, Property, General Welfare, and Treaty.

^{1/} See Cooley's Constitutional Limitations, vol. 1, p. 11 (8th Ed., Carrington, 1927). 297 U. S. at 63.

^{2/} Numbers in parentheses make reference to the Bibliography, pages 31 to 42.

Commerce Clause

The Commerce Clause vests in the Federal Congress the pre-eminent right to control navigable waters in the interest of commerce. The clause provides that the Congress "shall have power to regulate commerce with foreign nations and among the several states and with the Indian Tribes." (186) Control of waters for commerce includes not only control for navigation, but also for flood protection, watershed development, and the recovery of the cost of improvements through the production and sale of water-generated electric power. (193)

The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use.^{1/} But the operation of boats will be subject to the admiralty and maritime rules of navigation, and to special rules that fix the measure of liability for accidents. (90)

The first cases arising over application of the navigation servitude started with efforts by the Government to compel removal of structures or other obstructions which were interfering with navigation. In the early days, these obstructions were usually bridges, wharves, or similar structures. It is now well established that navigable waters may not be obstructed, bridged, or controlled except by Federal authority.^{2/} Also, the riparian owner may be denied compensation when he is damaged by Federal commerce projects which change the regimen or level of the navigable waterway or deny him access thereto. (198)

1/ Historically, all citizens have a right to hunt and fish in navigable waters. Grimes Packing Co. v. Hynes. (82)

2/ Obstructed: act of March 3, 1899. (27) United States v. Republic Steel Corp., (196) held that the dumping of refuse into a navigable stream so as to reduce its depth constituted an obstruction forbidden by the act of March 3, 1899. Also, Jones Towing Inc. v. U.S. (89) and Wyandotte Transportation Co. v. U.S. (200) define responsibilities of one who obstructs, impedes, or creates a hazard in navigable waters.

Bridged: General Bridges Act of August 2, 1946. (147) Until 1946, no compensation was allowed a bridge owner who was obliged to alter his bridge because of navigation improvements. See Union Bridge Co. v. U.S. (192) and Louisville Bridge Co. v. U.S. (91) The Chief Engineer is authorized under 33 U.S.C. § 701 p (185) to include at Federal expense the cost of altering legally constructed railroad bridges and approaches where required in connection with a flood control project. Also, the Truman Hobbs Act of July 24, 1946, (146A) provides a cost-sharing formula for alteration of railroad and highway bridges that unreasonably obstruct navigation.

Controlled: Federal Power Act. (124) See Tatum v. Blackstock. (183)

Too, when the flow of non-navigable streams is required to maintain the capacity of a navigable stream, the obstruction or limitation on such flows may be prevented by Federal action.(197)

Congress has used the authority of the Commerce Clause to designate certain waterways as worthy of improvement and maintenance at Federal expense in the interest of navigation. The Federal Government does not maintain other navigable waterways although navigation aids such as hazard or channel markers are provided as needed.

Property Clause

The Property Clause provides that "the Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States." (189) This grant of power permits the United States to reserve water, for present and future use, in non-navigable (78) and navigable (72) waterways which cross or abut land areas reserved for Federal purposes. The quantities of water which can be so reserved are those required to carry out the purpose for which the Federal lands were reserved.^{1/}

The Property Clause has also been used to affirm Federal authority to build irrigation projects serving Federal lands.(194)

General Welfare Clause

The General Welfare Clause authorizes the Congress to use the Federal revenues to provide for the general welfare of the United States.(187) This grant of power permits the Congress "to promote the general welfare through large-scale projects for reclamation, irrigation or other internal improvements." (195)

Treaty Clause

The Treaty Clause authorizes the President to make treaties with the advice and consent of the Senate.(188) The treaty power is unlimited except for those restraints found in the Constitution itself and those arising from the nature of the State and Federal Governments. A treaty could not authorize what the Constitution forbids, nor a change in the character of Federal or State Government, nor a cession of state territory without consent of

^{1/} Arizona v. California. (72)

See also p. 265 of the Special Master's Report in Arizona v. California, supra, note 69.

the state.(75) Treaties between the United States and Canada which involve the Columbia-North Pacific Region's land and water resources are covered under Treaties and Compacts in this appendix.

Treaties creating Indian reservations in the Columbia-North Pacific Region (87) have also been held to have impliedly reserved water for the irrigation of the reservation lands.(199) However, the authority of the Federal Government to reserve water for Indian lands is considered to be founded on the Property Clause of the Federal Constitution.^{1/}

CONGRESSIONAL LEGISLATION

Historical Background

The Columbia-North Pacific Region's potential was first surveyed by the Lewis and Clark Expedition in 1805 and 1806. At that time, waters of the Columbia River and its main tributaries were considered to be primarily useful for trapping and navigation.

Until after the Civil War, congressional legislation for this most western part of the Nation emphasized communications, Indian pacification, and settlement. The only regional resources considered in legislation were the naked land, minerals,^{2/} and timber.^{3/}

With the close of the Civil War and the renewed surge of people to the West, congressional enactments affecting the Columbia-North Pacific Region and other semiarid sections of the West began increasingly to recognize that the creation of national wealth and of citizen opportunity depended largely on the development of water resources.^{4/}

^{1/} See Reference 72 and 201 and Footnote 1, page 12, and accompanying text. Too, in Winters v. United States, *supra*, reliance was placed on principles set out in United States v. Rio Grande Dam and Irr. Co., (197) which dealt, in relevant part, with Federal rights under the Property Clause.

^{2/} Permitted to Northern Pacific Railway Company under land grants: act of July 2, 1864.(3)

^{3/} Permitted to Union Pacific Railroad Company under land grants: act of July 1, 1862.(2) See also subsequent Timber Culture Acts beginning with the act of March 3, 1873 (5) which allowed entries on a quarter section of public land for the purpose of developing timber growth.

^{4/} See F. H. Newell, first Chief Engineer of the Reclamation Service, in the First Annual Report of the Reclamation Service (Washington: Government Printing Office, 1903) at pp. 22-24.

Recognition of the importance of the streams of the region came first in 1852 on the Willamette River with the construction of 450 feet of wing dams. In 1877 navigation improvements were started in the lower Columbia River downstream from Vancouver. Other early improvements were the locks at Cascade Rapids in 1896 and The Dalles-Celilo Canal in 1915.

In 1877, Congress passed the Desert Land Act.⁽⁸⁾ This act provided that a settler who was willing to develop irrigation would be entitled to acquire 640 acres of the public land. The act also legally separated the water from the soil so that the water could be transported to the place where it could best be used.⁽⁷⁴⁾ This permitted full development of the doctrine of appropriation and of the water use principle of "first in time, first in right." Without this doctrine, irrigation would have been confined to the river bottoms, since only riparian owners could then have legally used the water.

During this same period, Congress began to appropriate monies for surveys, such as those of Powell and Hayden, who explored and expounded the potential of developed water resources for reclamation.^{1/}

Strong congressional support for large-scale water resource development was thereafter expressed in the Joint Resolution of March 20, 1888.⁽⁸⁸⁾ This resolution directed the Secretary of the Interior "to investigate the practicability of constructing reservoirs for the storage of water in the arid region of the United States." The Congress emphasized the fact that,

" . . . a large portion of the unoccupied public lands of the United States is located within what is known as the arid region and now utilized only for grazing purposes, but much of which, by means of irrigation, may be rendered as fertile and productive as any land in the world, capable of supporting a large population thereby adding to the national wealth and prosperity."

One hundred thousand dollars was initially appropriated for the Secretary's investigation.^{2/} At the same time, Congress withdrew from sale or entry all lands needed for irrigation works or

^{1/} Act of March 3, 1873 (4); act of July 31, 1876 (6); act of March 3, 1877 (7); Major John Powell's report of 1879 is credited with sparking and then snowballing public and congressional interest in a national reclamation program. (92, p. 48)

^{2/} Act of October 2, 1888.⁽¹³⁾ This \$100,000 appropriation was shortly followed by an appropriation of \$250,000 for irrigation investigations, act of March 2, 1889.⁽¹⁴⁾

"susceptible of irrigation." (13) The withdrawal was prompted by the congressional concern that "continued disposal of lands in that region under the land laws might render it difficult and costly to obtain necessary rights-of-way for canals and ditches." (86) The outcry from prospective settlers, however, required a modification of the withdrawal action and, in 1890, Congress stipulated that lands west of the 100th meridian could be entered or sold if they were made subject to a right-of-way for ditches or canals constructed by authority of the United States.^{1/}

In the General Allotment Act of 1887, Congress gave further emphasis to water resource development when it directed the Secretary of the Interior to arrange for the "just and equal distribution of water" among Indian allottees. (11) Succeeding agreements with the Indian Tribes made additional and specific provisions for the construction of irrigation facilities.

Increased state participation in water resource development was also sought through the Carey Act of 1894. (17) That act provided that each of the public land states could receive up to a million acres of public land without charge, if the state would arrange for the reclamation and settlement of such land in 160-acre tracts.

Congressional enactments and grants of public lands and rights-of-way now further emphasized the national interest in water resource development. These new laws covered municipal water facilities, (19) the development of power, (20) water transportation, and the development of power "as subsidiary to the main purpose of irrigation," (24) stock reservoirs, (22) and fishways (29). At the same time, appropriations for water surveys continued. (16, 18, 21, 23, 25, 26, 28, 30, 32)

The Reclamation Act of June 17, 1902, (31) was the culmination of the many studies, surveys, and hearings which Congress had theretofore directed.^{2/} The act provided that a Reclamation Fund should be accumulated from the sale or disposal of public lands in the West, and that the Secretary should use such fund for the survey, construction, and maintenance of irrigation works in the West.

In 1906, Congress recognized that reclamation development should include not only irrigation but hydroelectric power generation and the development of municipal water supplies. (33) The sale of supplemental water for lands already irrigated was authorized in

^{1/} Act of August 30, 1890. (15) Selected reservoir sites, however, were still withheld from sale or entry.

^{2/} The platforms of the three major parties all strongly urged a national reclamation program. (92, pp. 40-41)

the Warren Act of 1911.(36) Congress also repeatedly reaffirmed its interest in the family sized farms which the 1902 act was designed to provide.(31) In 1920, Congress provided for the furnishing of water for miscellaneous purposes, opening the way to industrial use of reclamation water.(40) Also in 1920 Congress passed the Federal Water Power Act as a general authority for non-Federal development of the water power of the waters of the United States.

The so-called "308 Reports" of the Corps of Engineers,^{1/} which were often the initial comprehensive study in many basins, covered examinations and surveys of navigable streams and their tributaries for power development, improvement of navigation, control of floods, and the needs of irrigation. Prosecution of these extensive surveys was authorized by the 1927 Rivers and Harbors Act.(43) The 1932 and subsequent review reports for the Columbia River were instrumental in attaining many of the large multipurpose projects undertaken on the river and its major tributaries.

The concept of the multipurpose project, which came to full fruition in the Columbia-North Pacific Region was first presented in the Boulder Canyon Project Act of 1928.^{2/} During the thirties, this concept of integrated resource development was applied on a large scale in the Tennessee Valley,^{3/} in the Columbia Basin, (47) and in California's Central Valley.(50)

It was the Bonneville Project in Oregon and Washington, where construction was initiated in 1933, which presaged and was the forerunner of full-scale basin resource development.(71) The Bonneville Project, which stemmed from recommendations of the first "308 Report" on the Columbia River, was conceived to serve navigation, flood control, and power generation. Responsibility for the project fell on the Corps of Engineers as the construction agency, after having been started by the Works Progress Administration.

^{1/} This designation arises from the fact that cost estimates of the surveys were published in H. Doc. No. 308, 69th Congress, 1st session, (1926).

^{2/} Act of December 21, 1928.(44) The Boulder Canyon Project was to serve the purposes of river regulation, navigation, flood control, irrigation, domestic use, and power. Project revenues were to be placed in a Colorado River Dam fund from which the project construction costs were to be liquidated. While the Boulder plan was untried, and only time was to prove its eminent practicability, its effect on reclamation planners was electric. The tremendous potential of integrated resource development had been recognized and accepted.

^{3/} Act of May 18, 1933.(46) The TVA's use of the corporate form for its development agency was unique and was not adopted in the West.

The Bonneville Power Administration was created in 1937 to distribute the energy produced. The die was thus cast for a multipurpose project with multiagency participation.

The Columbia Basin Project in Washington, known originally as the Grand Coulee Project, was the first to adopt the integrated resource plan as part of its basic 1935 authorization.(94) The power function was here assigned responsibility for paying irrigation costs which the farmers could not carry.(94) This use of power revenues to assist in the repayment of project construction costs which the farmers could not carry had been suggested by the arrangement of the Shoshone Project in Wyoming, where power revenues were assigned to pay the cost of multipurpose Buffalo Bill Dam and Reservoir.(45) This use of revenues earned by one function of a project, for helping to pay costs required for another function of the project, was then confirmed by the Hayden-O'Mahoney amendment to the Interior Department's Appropriation Act of 1939.(52)

The Reclamation Project Act of 1939 further endorsed the principle of integrated resource development and established the proposition that the water users' obligation to repay project construction costs should be measured by the water users' repayment ability.^{1/}

With the stage thus set, both the Bureau of Reclamation and the Corps of Engineers began planning for full-scale development of the Columbia-North Pacific Region. The Bureau plan was incorporated in H.D. 473 (84) and understandably placed emphasis on irrigation and power development. The Corps' plan was incorporated in H.D. 53 (85) and understandably placed emphasis on power development, flood control, and navigation. Both plans contemplated full multipurpose development with participation by all interested Federal and State agencies in the region. Consolidation of the two plans was effected in a joint agreement between the Bureau and the Corps of Engineers. Under this plan, the Corps was to build the downstream and mainstem reservoirs whose functions were primarily navigation and flood control; and the Bureau was to build the upstream reservoirs and the facilities whose functions were primarily for irrigation and other consumptive use purposes. The Bonneville Power Administration was to market the electrical energy.

From the point of water resource development, the plan was the most comprehensive theretofore envisaged. It covered works for

^{1/} Act of August 4, 1939.(56) The act also improved the mechanics for constructing, operating, and financing multipurpose projects. Further relief to distressed water users was also here authorized. This legislation was strongly influenced by Senator Carl Hayden's treatise on "National Irrigation Policy, Its Development and Significance." Senate Document No. 36.(97)

the development of irrigation, power, flood control, navigation, domestic, municipal and industrial water supplies, fish and wildlife, recreation, pollution abatement, and hydrology research. The plan also confirmed the now long-standing congressional principle that water resource development was essential for the economy and continued homemaking potential of the Columbia River Basin.

On December 16, 1946, the Secretary of War and the Secretary of Agriculture entered into an agreement to establish principles and policies to govern the planning, development, and management of water and land resources associated with water resource development projects constructed or to be constructed by the Corps of Engineers and associated with units of the National Forest System. This agreement was further implemented by the Memorandum of Understanding of August 15, 1964, between the Secretary of the Army and the Secretary of Agriculture.

In 1948, the Federal Government entered the field of pollution control under legislation which contemplated State and Federal cooperation through broad programs of research, training, planning, abatement efforts, and financial assistance.

At the same time, in the development of their water resource programs, Federal agencies began to accelerate the development of outdoor recreation opportunities in the vast water and shoreline areas created by Federal impoundments. Because water is a prime factor in many recreation activities and recreation development is so extensive today, water-based recreation may now be considered a prime factor in the economic justification for the construction of multipurpose dams and reservoirs.

Finally, natural beauty is now recognized as a natural resource which requires protection. Beautification is considered from the beginning of a Federal water survey report and continues through all phases of planning into the actual operation and maintenance of the project.

Existing Legislation

The preceding paragraphs indicate the continued expansion of Federal legislation in the water and related land resource fields. Understandably, the many legislative actions led to both overlapping and conflicting authorizations among Federal programs. Recognizing the difficulties and differences in 1961, the President of the United States requested the Secretaries of Agriculture, the Army, Interior, and Health, Education, and Welfare to review existing principles, standards, and procedures and make such recommendations as deemed appropriate. The results of this request have been published as Senate Document No. 97, 87th Congress, Second Session,

which establishes the policies, standards, and procedures to be used by Federal agencies in the formulation, evaluation, and review of plans for use and development of water and related land resources.

While Congress had previously recognized the functions of Federal participation, Senate Document 97 states that in water and related land development programs provision will be made for:

1. Adequate supplies of waters of suitable quality for domestic, municipal, agricultural, and industrial uses.
2. Facilities and controls to assure water of suitable quality for all purposes.
3. Navigation facilities to provide a needed service as part of the Nation's transportation system.
4. Hydroelectric power where advantageous.
5. Flood control with prevention measures to protect people, property, and productive lands from flood losses.
6. Land stabilization measures to protect land and beaches.
7. Drainage measures, including salinity control.
8. Watershed protection and management measures.
9. Outdoor recreational and fish and wildlife opportunities where they can be provided or enhanced.

The document also states that, in addition to developmental programs, equal consideration will be given to preservation and well-being of people.

At the Federal level, all formulation, evaluation, and review of water and related land resources plans are subject to the provisions of Senate Document 97. The Congress and Federal Departments have endorsed the policies, standards, and procedures. The following paragraphs outline additional legislation applicable to individual agencies.

Fish and Wildlife

Aid to States The Pitman-Robertson Act of September 2, 1937, (137) and the Dingell-Johnson Act of August 9, 1950, (152) authorized the Secretary of the Interior to assist the states in the development of projects to restore and manage fish and wildlife populations and to preserve and improve sport fishing, hunting, and related activities.

Investigations and Planning for Fish and Wildlife Purposes Since 1888, the Secretary of the Army has had discretionary authority to provide "sufficient fishways," whenever navigation improvements are found to be obstructions to the passage of fish. (12) Also, Corps of Engineers investigations and improvements of waterways must include "a due regard for wildlife conservation." (54) In addition, no use of Corps reservoir areas is permitted that is inconsistent with laws for the "protection of fish and game" of the state in which the area is located. (58)

In the case of non-Federal power developments, Federal Power Commission Licensees must construct, maintain, and operate "such fishways as may be prescribed by the Secretary of the Interior." (41)

For the Columbia River and its tributaries, the Secretary of the Interior is directed to conduct such investigations, surveys, and experiments as may be necessary for the conservation of the fishery resources. (53) He is also directed to construct and install devices in the Columbia River Basin for the improvement of feeding and spawning conditions for fish and for the protection and passage of migratory fish. (53)

The Fish and Wildlife Coordination Act of March 10, 1934, (128) as amended by the acts of August 14, 1946, (148) and of August 12, 1958, (161) charged the Fish and Wildlife Service with the duty of investigating the possible damage to fish and wildlife resources caused by water projects and of recommending means and measures (1) to reduce such damage and (2) to improve and develop fish and wildlife resources. Modifications of existing water projects for fish and wildlife advantage were also authorized. The Watershed Protection and Flood Prevention Act of August 4, 1954, (153, 159, 162, and 163) extended the Service's fish and wildlife investigation responsibilities in connection with projects authorized by that act.

Local Cost-Sharing in Fish and Wildlife Facilities The Federal Water Project Recreation Act of July 9, 1965, (175) provided that the cost of mitigating the damage to fish and wildlife resources

caused by the development of a Federal water project should be a part of the total project costs. The act also provided that the construction of facilities that enhanced fish and wildlife resources were authorized where state or local interests agreed to pay one-half of the specific costs for those facilities and agreed to operate and maintain them. The other half of the specific costs, and all costs of "joint facilities" which served functions additional to the fish and wildlife function, would be paid by the Federal Government on a nonreimbursable basis.

Flood Control

General Flood Control In the 1880's, the Corps of Engineers was authorized to construct flood control levees along the Mississippi River; and, in 1917, the Corps was assigned the responsibility for flood control work on the Sacramento River. The Flood Control Act of 1936^{1/} stated that "flood control on navigable waters or their tributaries is a proper activity of the Federal Government in cooperation with the States, their political subdivisions, and localities thereof." The 1936 Flood Control Act also divided the responsibility for flood control between the Corps and Department of Agriculture. In the act, Congress declared that Federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and prosecuted by the Department of the Army under the direction of its Secretary and the supervision of the Chief of Engineers. By these same provisions, jurisdiction was given to the Department of Agriculture with respect to investigations of watersheds and measures for runoff and waterflow retardation and soil-erosion prevention, except as to reclamation projects under the Interior Department.

Legislation has been passed authorizing the provision of flood control storage in Federal projects constructed by agencies other than the Corps, and the Federal Power Commission can include flood control operational requirements in the licensing of non-Federal reservoir operators.

Small Flood Control Projects In addition to the major flood control project discussed above, the Corps of Engineers may

^{1/} Act of June 22, 1936, (48) amended by the act of August 28, 1937, (51). This legislation required local agencies to contribute the right-of-way needed for the flood control projects; however, the Flood Control Act of June 28, 1938, (139) relaxed this requirement in the case of certain projects.

construct small flood control projects under Section 205 of the 1948 Flood Control Act, (150) as amended, each not exceeding \$1 million in government cost, without specific authorization by Congress; however, total nationwide expenditures for the small flood control projects may not exceed \$25 million in any one year.

Emergency Work Emergency bank protection work for the protection of public property which does not involve expenditures of over \$50,000 for any one locality in any one fiscal year may be performed by the Corps of Engineers under Section 14 of the Flood Act of 1946.(146) Emergency clearing of snags and debris which does not involve expenditures of over \$100,000 for any single tributary in any one fiscal year may be performed by the Corps of Engineers under the Flood Control Act of 1954.(154) Emergency flood fighting and repair and rescue work may be performed by the Corps with available funds under the act of June 28, 1955.(155) Emergency repair work to public facilities damaged by floods may be performed by the Corps or the Bureau of Reclamation where directed by the Office of Emergency Planning, under Public Law 875.(63)

Flood Plain Studies Flood plain studies may be made by the Corps under Section 206 of the 1960 Flood Control Act, (167) where requested by a state or governmental agency to determine the use and best protection of flood plains.

Irrigation

Encouraging Private Irrigation Development The Desert Land Act of March 3, 1877, (103) authorized the sale of 640 acres of public land to any person who would irrigate it within 3 years. In 1890, Congress limited all entries to a 320-acre maximum for a single claimant.(15) The act also legally separated the water from the land so that the water could be transported to the place where it could best be used.(74) This permitted the full development of the doctrine of appropriation and of the water use principle of, "first in time, first in right." Without this doctrine, irrigation would have been confined to the river bottoms, since only riparian owners could then have legally used the water.

The Carey Act of August 18, 1894, (108) provided that each of the public land states could receive up to a million acres of public land without charge, if the state would arrange for the reclamation and settlement of such land in 160-acre tracts.

Project Development The Reclamation Act of June 17, 1902, (112) authorized the Secretary of the Interior to build water diversion and impoundment facilities to provide irrigation water for public and private lands. The cost of constructing, operating, and maintaining such works was to be repaid by the water users pursuant to individual water right applications which provided for a lien on the benefited land. In accordance with the one-to-a-customer precedent set up in the Pre-emption and Homestead Laws, (83 and 93) water from Reclamation projects was not to be made available to any acreage in excess of 160 irrigable acres per single ownership. This rule was somewhat relaxed by Section 46 of the Adjustment Act of 1926 (42) which now permits project water to be delivered to lands in excess of 160 irrigable acres per single ownership if the excess landowner agrees to dispose of his excess land in a reasonable time at a dryland price. The reason for requiring the sale of excess land at a dryland price is to avoid the purchaser's paying twice for his irrigation water right. If he paid an irrigable-land price for land on which construction charges were owing the United States, he would be paying twice for his water right: first to the seller of the excess land and second to the United States.

The Warren Act of February 21, 1911, (116) permits the Secretary of the Interior to sell reclamation project water to nonproject water users and to permit such water users to carry or store water in project works if there is capacity surplus to the needs of the reclamation project.

The Extension Act of August 31, 1914, (119) permits water users to take over the operation and maintenance of reclamation projects through water users' organizations. The act of May 15, 1922, (125) provides that where an irrigation district accepts a general obligation to pay construction, operation, and maintenance costs on account of reclamation works, individual water right applications with their attendant liens on the benefited lands may be canceled. Subsequent Acts of Congress have provided extensions of time on the payment of reclamation construction costs. The Fact Finders' Act of 1924, (81) and the Reclamation Project Act of 1939 (56) also now permit the repayment of reclamation construction costs to be geared to the payment capacity of the benefited lands. The Hayden-O'Mahoney amendment in the act of May 9, 1938, (138) authorizes the use of power and other project revenues to reduce the project construction costs which would otherwise be payable by the irrigation water users.

Financing Water Users The Rehabilitation and Betterment Act of October 7, 1949, (151) authorizes the Secretary of the Interior to contract for the financing of rehabilitation and betterment work on existing reclamation projects. The water users'

repayment of Federal expenditures is to be without interest and in accordance with the water users' repayment ability. The water users themselves are permitted to perform the necessary work. The act of July 4, 1955, (156) provides for Federal loans to permit the water users themselves to construct irrigation distribution systems on reclamation projects. The Small Reclamation Projects Act of 1956, (158) authorizes the Secretary to loan money for the construction of small reclamation projects. Loans must be in amounts not exceeding \$6,500,000 and for projects not exceeding \$10 million in total costs. The water users' repayment of the government loan may be scheduled over a period not to exceed 50 years and is without interest except for costs allocable to lands in excess of 160 irrigable acres per single ownership.

The act authorizing construction of the third Grand Coulee Powerplant (68) provided for the establishment of a Pacific Northwest Basin account. This account would include revenues from sales of commercial power marketed through the Federal Columbia River power system. The act also provided for financial assistance from this account to projects constructed under the Federal reclamation laws in those instances where the costs allocated to irrigation were beyond the ability of the irrigation water users to repay within the prescribed repayment period. This section was subsequently amended (69) to limit the assistance to funds available from net power revenues and to not exceed an annual average of \$30 million in any period of 20 consecutive years.

Irrigation of Indian Lands was authorized by the General Allotment Act of February 8, 1887, (105) which also provided that the Secretary of the Interior should make a just and equal distribution of the available water among the Indians.

The act of April 4, 1910, (114) then made specific provision for irrigation developments on Indian reservations and authorized the employment of a superintendent of irrigation. Special authorizations for specific Indian irrigation projects have also been provided by Congress.

Use of Indian water rights for nonirrigation purposes has not been judicially questioned. In Arizona v. California, the Master emphasized that in fixing the measure of the Indians' water right he did not rule on whether such rights might be used for other than irrigation purposes. (72, supra p. 265)

Municipal and Industrial Water Supply

Municipal and Industrial Water Use Section 4 of the act of April 16, 1906, (113) permits the Secretary of the Interior to

provide and contract for water for municipal purposes. The act of February 25, 1920, (121) permits the Secretary to contract for the sale of reclamation project water for miscellaneous purposes. In 1937, Congress made special provision for domestic water supply at flood control projects.(49) Section 9(c) of the Reclamation Project Act of 1939, (140) permits the Secretary to furnish reclamation project water for municipal water supply or for miscellaneous purposes under 40-year contracts. The Water Supply Act of July 3, 1958, (160) authorizes reserve storage space in any reservoir constructed by the Bureau of Reclamation or Corps of Engineers to meet anticipated future municipal and industrial needs, provided that state or local interests give adequate assurance of a future need for such water and a willingness to pay therefor.

The act of May 28, 1940, (142) also authorized the Secretary of Agriculture to contract with a municipality for the withdrawal from entry, location, appropriation, or conflicting use of any national forest lands which provide the watershed for the municipality's water supply.

Regulation of Drinking Water Section 361(a) of the Public Health Service Act (144) authorizes the Surgeon General to control the transmission of communicable diseases by regulating drinking and culinary water which is moved in interstate commerce.

Emergency Water Supplies Under Section 2(c) of Executive Order No. 11001, (79) the Secretary of Health, Education, and Welfare has responsibility for preparing plans to assure provision of usable public water supplies for essential community uses in an emergency.

Navigation

Navigation, General The act of April 30, 1824, (98) first vested the Corps of Engineers with responsibility for improving waterways for navigation. Beginning with the act of May 24, 1824, (99) investigations and improvements for navigation and related purposes have been authorized by a series of rivers and harbors acts, from which basic policies and procedures have been established. The Rivers and Harbors Act of March 3, 1899, is the principal law which protects navigable waters of the United States. This law controls the dredging, filling, and building of structures in navigable waters.(111) The 1920 Rivers and Harbors Act (123) expanded the Federal policy regarding navigation improvements and established general requirements for local cooperation where the benefits from such improvements are mainly local in nature. Subsequent acts have further clarified and expanded the Federal policy and have authorized many specific navigation projects..

Protection of Navigable Waters 33 U.S.C. 403 forbids generally the obstruction of navigable waters and provides for the issuance of a permit by the Secretary of the Army for works in such waters. 33 U.S.C. 404 provides for the establishment of harbor lines and states conditions to grants for extension of piers, etc. 33 U.S.C. 407 forbids generally deposit of refuse in navigable waters. 33 U.S.C. 409 covers obstruction of navigable waters by vessels and marking and removal of vessels and 33 U.S.C. 414 and 415 relate to the removal of water craft. (184)

Locks in Non-Federal Dams The Federal Power Commission can require that provision be made for navigation locks in licensed non-Federal projects; the locks would be constructed and operated by the Corps of Engineers.

Small Navigation Projects Under Section 107 of the 1960 Rivers and Harbors Act, amended, (166) the Corps may construct small navigation projects, each not exceeding \$500,000 in government cost, without specific authorization by Congress; however, feasibility requirements are the same as for other navigation projects, and total nationwide expenditures for the small navigation projects may not exceed \$10 million in any one year.

Emergency Snagging and Clearing Snagging and clearing work for navigation is provided for by Section B of the Rivers and Harbors Act of 1945. (96)

Boating The Motorboat Act of April 25, 1940, (141) prescribed standards for motorboat lights, signals, life preservers, fire extinguishers, engine facilities; provided for the licensing of commercial boats; and fixed penalties for the violation of standards or licensing laws.

The Federal Boating Act of September 2, 1958, (164) required the numbering of vessels propelled by machinery of more than 10 h.p. and established rules of liability for collision, accident, or other casualty.

Bridges The General Bridge Act of August 2, 1946, (147) required approval of the Chief of Engineers and the Secretary of War before bridges could be constructed over navigable waters. Authority to furnish this approval has now been transferred to the Coast Guard. (80)

Water Quality and Pollution Control

Until 1948, water pollution control activities were the primary concern of the states. Prior to that time the Federal Government dealt only with pollution control in connection with protecting the navigability of waterways, the handling of oil and gas wastes, and the suppression of waterborne diseases.(191)

Federal Water Pollution Control Act The Federal Water Pollution Control Act of June 30, 1948, (149) signalized the new congressional purpose that water quality and pollution control should thereafter be a major concern of the Federal Government.

The basic legislation which was amended by the acts of July 9, 1956, (157) and of July 20, 1961, (168) and by the Water Quality Act of October 2, 1965, (177) and the Clean Waters Restoration Act of November 3, 1966, (179) provided for the following activities:

1. Federal grants to state and local agencies were authorized (a) to construct waste treatment works; (b) to establish pollution control agencies; (c) to participate in basin water quality projects; and (d) to conduct water quality research, demonstration, and development programs. Grants were also authorized to schools, other institutions, and students for enlarging training and activity in water quality control.
2. Federal Water Pollution Control Administration research and development in water quality were directed.
3. Technical assistance by Federal Water Pollution Control Administration to public and private agencies in pollution control was authorized where request was made through state agencies.
4. Development and application of water quality control guides on a basin-wide and long-term basis were directed.
5. Pollution surveillance was to be effected by the collection, evaluation, and dissemination of data on pollution problems and their solution.
6. Training of pollution control personnel was to be expedited.

7. Public information on water quality and pollution control was to be widely disseminated.
8. Field and research laboratories were to be established to develop techniques and to train personnel in water quality control.
9. Enforcement programs were to be established to assure the development of water quality standards and the abatement of water pollution, where possible.
10. Pollution control for Federal installations was to be pressed.
11. Oil pollution of navigable waters was to be controlled by the Secretary of the Interior with the consent of and participation by the Coast Guard and the Corps of Engineers.
12. Special studies on the sources, prevention, and control costs of pollution were authorized.
13. A Water Pollution Control Advisory Board was to be appointed by the President (a) to consult with and advise the Secretary of the Interior on policy matters relating to pollution control activities and (b) to hold public hearings where appropriate.

Public Health Service Act

Research and Investigations Section 301 of the Public Health Service Act of July 1, 1944, (144) authorizes the Surgeon General to conduct research and investigation on disease prevention including water purification, sewage treatment, and pollution control. Grants-in-aid for comprehensive health planning, involving water quality, were also authorized by the 1966 amendment.

Solid Waste Disposal Under the Solid Waste Disposal Act of September 20, 1965, (178) the Secretary of Health, Education, and Welfare is authorized to conduct, stimulate, and provide grants-in-aid for studies and work on solid waste disposal.

The Consolidated F.H.A. Act of 1961, Water, Waste Disposal, and Similar Developments This act, (1) as amended, authorizes long-term direct and insured loans as well as grants of up to 50 percent of construction costs to public and nonprofit associations for the

development of community water and waste disposal systems in rural areas, including rural municipalities of not more than 5,500 population. Planning grants may also be made for the development of official comprehensive area water and sewer plans.

Power

Development An important purpose served by water, which is under the jurisdiction of Congress, is the development of power. As early as 1879, Congress empowered the Secretary of the Army to lease water power to a private company.(9) The first specific authorization for construction of a power project in a navigable stream was in 1884.(10)

Through the act of January 25, 1910, (35) and Executive Order No. 10355 of May 26, 1952, the Secretary of the Interior is authorized to withdraw and reserve any public land of the United States for waterpower sites.

Section 5 of the act of April 16, 1906, (113) authorized the Secretary of the Interior to develop and sell electric energy in connection with Reclamation projects. Surplus power or power privileges could be sold or leased for 10 years, with purchasers for municipal use getting a preference. Section 9(c) of the Reclamation Project Act of 1939, (140) permits sales of power or leases of power privileges for periods not exceeding 40 years, with preference in purchasing or leasing going to municipalities or other public corporations or agencies, and to cooperative and other nonprofit organizations having R.E.A. financing.

"In order to make possible the economical future development of water power," the Secretary of the Army in 1912 was authorized under legislation effective today to provide, in the permanent parts of any authorized navigation dam, the necessary works "for future development of its water power."(37) With respect to dams authorized in Rivers and Harbors Acts since 1945, with one possible exception, Congress has directed the installation of penstocks and other facilities adaptable to future use for development of power, when approved by the Secretary of the Army.(59)

Licensing Hydroelectric Projects The Federal Power Act of June 10, 1920, (124) established the Federal Power Commission and authorized it to investigate water resources and water power projects; and to license non-Federal waterpower projects which would require use of navigable waters, or waters critical for interstate commerce, or public or reserved lands of the United States. The act stipulated that the FPC's issuance of a license should be conditioned on the

comprehensive development of the waterway in the interest of water power, navigation, and "other beneficial public uses including recreational purposes."

Recommending Hydropower Installations Section 4 of the Flood Control Act of June 28, 1938, (139) authorized the Federal Power Commission to recommend the inclusion of penstocks for generating hydropower in future flood control dams of the Corps of Engineers.

Marketing Federal Power Marketing of Federal power is largely a responsibility of the Secretary of the Interior. In the Pacific Northwest, this responsibility has been assigned to the Bonneville Power Administration. (55, 57, 59, 60, 62, 76)

Recreation

General The general policy followed in the past, with respect to the installation of reservoir recreation facilities, has been that the Federal Government supplies the basic requirements for public health and safety, such as access roads, parking areas, water wells, sanitary facilities, boat launching ramps, camping areas, and picnicking facilities. As a cooperative venture, many of the states, counties, cities, and communities actively participate in the funding, construction, and maintenance of public use facilities at Federal projects.

Uniform policies, with respect to recreation and fish and wildlife benefits, and costs of Federal multipurpose water resource projects, have been set out in the Federal Water Project Recreation Act of July 9, 1965, (175) to guide the cost sharing of recreation facilities, thus encouraging greater non-Federal participation. The non-Federal interests have been further encouraged by the Land and Water Conservation Fund Act of 1965 (172) which established a land and water conservation fund to assist the states and Federal agencies in meeting the outdoor recreation demand.

Planning The act of May 28, 1963, (169) authorized the Secretary of the Interior to inventory recreational resources and to classify them; to formulate a nationwide outdoor recreation plan; to provide technical assistance to Federal and non-Federal agencies in the development of outdoor recreation resources and to encourage interstate and regional cooperation in such development; to advance research and education in outdoor recreation; and to accept donations for advancing the purposes of the act.

Financing Recreation Planning and Development The Land and Water Conservation Fund Act of 1965 (172) provided that Federal funds accruing (1) from entrance and users' fees at recreational areas, (2) from disposal of Federal surplus property; and (3) from the motorboat fuels tax, should be placed in a land and water conservation fund in the National Treasury. In 1968, Congress authorized receipts of outer shelf oil revenues of not to exceed \$200 million to be deposited in the fund. The money in the fund, when appropriated by Congress, is available for (1) Federal land acquisition for outdoor recreation purposes by the National Park Service, the Forest Service, and the Bureau of Sport Fisheries and Wildlife; and (2) for 50-50 matching grants to states, and through the states, to local governments, for planning, acquisition, and development of outdoor recreation areas and facilities. The Bureau of Outdoor Recreation is responsible for the administration of the fund.

Recreation in Multipurpose Projects The Flood Control Act of 1944 first recognized recreation as a project purpose. The Federal Water Project Recreation Act of July 9, 1965, (175) provided for recreation planning and development at multipurpose projects constructed or authorized for construction by Federal agencies. The act requires that up to one-half of the construction costs and all of the operation and maintenance costs of project features specifically allocated to recreation would be financed from non-Federal sources.

Scenic Rivers In 1968, Congress concluded that certain rivers in the United States possessed outstanding scenic, recreational, geologic, cultural, historical, and like values to warrant retention in their present environment. These rivers were to be protected from spoliation and industrial use. The Secretaries of the Interior and of Agriculture were directed to initiate a program that would accomplish this purpose.

The act of October 2, 1968, (182) states that: "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic, and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic, and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved."

The act authorized the Secretaries of the Interior and of Agriculture to institute a program of land acquisition and of controlled use of certain rivers to protect their wild and scenic values. In the Columbia-North Pacific Region, the following streams were designated by the act as components of the National Wild and Scenic Rivers System:

Clearwater, Middle Fork, Idaho
Rogue, Oregon
Salmon, Middle Fork, Idaho

In addition, the following streams were designated for potential addition:

Bruneau, Idaho
Flathead, Montana
Illinois, Oregon
Moyie, Idaho
Priest, Idaho
St. Joe, Idaho
Salmon, Idaho
Skagit, Washington

The act also provides that the Wild and Scenic Rivers System will include state designated rivers approved for inclusion by the Secretary of the Interior.

Watershed Protection

Erosion Control The act of April 27, 1935, (132) directed the Secretary of Agriculture to establish the Soil Conservation Service to demonstrate, carry out, and cooperate in measures to conserve soil and moisture.

Reorganization Plan No. IV of April 11, 1940 (143) transferred the responsibility for soil and moisture conservation operations on lands administered by the Department of the Interior from the Secretary of Agriculture to the Secretary of the Interior.

Water Flow Retardation Section 2 of the Flood Control Act of June 22, 1936, (134) authorized the Secretary of Agriculture to make preliminary examinations and surveys for runoff and water-flow retardation and soil erosion prevention on watersheds. Special projects for water flow retardation work are authorized by Section 13 of the Flood Control Act of December 22, 1944. (145) Section 15 of the same act authorizes the Secretary of Agriculture to perform emergency water retardation work.

Watershed Protection The act of June 4, 1897, (109) stated that a principal purpose for acquiring, improving, and protecting lands for national forests was to secure "favorable conditions of waterflows." Protection of the watersheds has, therefore, been a basic obligation of the officers administering the national forests. Section 7 of the Flood Control Act of June 28, 1938, (139) further authorized the Secretary of Agriculture to undertake any emergency measures required for runoff retardation and soil erosion prevention.

The program is carried out pursuant to the Soil Conservation and Domestic Allotment Act of 1936, (133) as amended.

Reserving and Acquiring Forest Lands and Water Section 24 of the act of March 3, 1891, (107) authorized the President of the United States to set apart and reserve public lands covered with trees or undergrowth. It is held that this reservation of national forest lands served to reserve water sufficient to effectuate the purpose for which the land reservation was made.(72) However, some states are not in agreement with this concept.

The Weeks Act of March 1, 1911, (116) authorized the Federal acquisition, by purchase or exchange, of forested, cutover, or denuded lands within the watersheds of navigable streams and provided for their inclusion in the national forest. Interstate compacts to protect forest and water resources were also authorized.

The Clark-McNary Act of June 7, 1924, (126) authorized the Secretary of Agriculture to cooperate with state and local agencies in reforestation activities, in fire protection for forested lands, and in other activities designed to perpetuate the forests. The act also authorized the Secretary to determine and report to the National Forest Reservation Commission^{1/} the location of public lands chiefly valuable for a streamflow protection in the interest of navigation or irrigation. The Commission then determined whether congressional authority for including the lands in the national forests should be asked.

The act of March 3, 1925, (127) as amended in 1950, expanded the reforestation authorities of the Secretary of Agriculture and authorized him to cooperate with state and private agencies in the reforestation of state and private lands.

^{1/} This Commission was established by Section 4 of the act of March 1, 1911, (117) and consisted of the Secretaries of War, Agriculture, and Interior, two senators and two representatives designated by the President.

Multipurpose Development

Early experience with single-purpose projects proved that many of the resulting structures could serve more than one purpose at little or no increase in cost. In addition, planning for integrated operation with other developments in a basin could provide more nearly optimum benefits at minimum costs. As these considerations became more and more evident, Congress responded with appropriate legislation permitting the various agencies to plan their water resource developments accordingly.

Section 9 of the Reclamation Project Act of 1939, (140) authorized the Secretary of the Interior to undertake multipurpose projects in which costs and benefits may be assigned to irrigation, power, municipal water supply, and other miscellaneous purposes, such as navigation and flood control.

The Flood Control Act of 1944, (145) prescribed the following standards for Federal water resource development:

1. Comprehensive development of the Nation's water resources was declared to be the national policy.
2. Federal developments would be advanced in cooperation with state and local agencies.
3. "The use of water for navigation . . . in States lying wholly or partly west of the 98th Meridian shall only be such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the 98th Meridian, of such waters for domestic, municipal, stockwater, irrigation, mining or industrial purposes."

The act of August 14, 1946, (148) and the Fish and Wildlife Coordination Act of August 12, 1958, (161) authorized the Secretary to provide for fish and wildlife needs in reclamation programs. The Federal Water Project Recreation Act of July 9, 1965, (175) implements the last two acts by providing for local participation and for the development of other recreational facilities.

The Watershed Protection and Flood Prevention Act of August 4, 1954, (153) authorized the Secretary of Agriculture to plan for and assist in the financing of projects for the control and use of water in subwatersheds not exceeding 250,000 acres in area. Water impoundments may not exceed 25,000 acre-feet in capacity. Project purposes may include flood prevention, land treatment, drainage, irrigation, water supply, streamflow regulation, wildlife, and recreation.

The act of June 12, 1960, (165) declared the congressional policy that national forests shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The act authorized the Secretary of Agriculture to build trails and roads to carry out this policy; and directed the Secretary to administer and develop renewable resources for multiple use and sustained yield. Federal cooperation with state and local agencies in the development and management of the national forests was also authorized.

Section 4(d) (4) of the Wilderness Act of September 3, 1964, (171) permits the President of the United States to authorize and regulate the prospecting for water resources and the building of water and power facilities within wilderness areas.

The O&C Revested Lands Acts of August 28, 1937, (136); the Taylor Grazing Act of June 28, 1934, (131) as amended and supplemented; and the Classification and Multiple Use Act of September 19, 1964, (170) established the policy that lands to be retained in Federal ownership and administered by the Bureau of Land Management shall be managed and developed under principles of multiple use and the renewable resources under principles of sustained yield.

Colorado River Project Act Another pertinent piece of recent legislation is the Colorado River Basin Project Act. (70) Title II of this act requires the Secretary of the Interior to "conduct full and complete reconnaissance investigations for the purpose of developing a general plan to meet future water needs of the Western United States." A final reconnaissance report is to be submitted by June 30, 1977.

Comprehensive Framework Studies

The Water Resources Planning Act of July 22, 1965, (176) established the Water Resources Council to be composed of the Secretaries of the Interior; Agriculture; Army; Health, Education, and Welfare; and the Chairman of the Federal Power Commission. Subsequently, the Council has been enlarged to include the Departments of Transportation, Commerce, and Housing and Urban Development. The Council was directed to maintain a continuing study and prepare an assessment biennially, or at such less frequent intervals as the Council may determine, of the adequacy of supplies of water necessary to meet the water requirements in each water resource region in the United States and the national interest therein; and to maintain a continuing study of the relation of regional or river basin plans and programs to the requirements of larger regions of the Nation, and of the adequacy of administrative and statutory means for the coordination of the water and related

land resources policies and programs of the several Federal agencies. The Council was also directed to appraise the adequacy of existing and proposed policies and programs to meet such requirements and make recommendations to the President with respect to Federal policies and programs.

The Water Resources Planning Act also authorized the President of the United States to establish river basin commissions when requested by a majority of the governors of the affected states. Such river basin commissions are to include a representative from each state within the basin and a representative from each Federal agency having a substantial interest in the commission work within the basin; also, if appropriate, a representative of any interstate compact commission having authority within the basin and a member of any international commission having jurisdiction in the basin. Each such commission for an area river basin, or group of river basins, shall, to the extent consistent with Section 3 of the Water Resources Planning Act of 1965,

1. Serve as principal agency for the coordination of Federal, State, interstate, local, and nongovernmental plans for the development of water and related land resources in its area, river basin, or group of river basins;
2. Prepare and keep up to date, to the extent practicable, a comprehensive, coordinated, joint plan for Federal, State, interstate, local, and nongovernmental development of water and related resources: Provided, that the plan shall include an evaluation of all reasonable alternative means of achieving optimum development of water and related land resources of the basin or basins, and it may be prepared in stages, including recommendations with respect to individual projects;
3. Recommend long-range schedules of priorities for the collection and analysis of basic data and for the investigation, planning, and construction of projects; and
4. Foster and undertake such studies of water and related land resources problems in its area, river basin, or group of river basins as are necessary in the preparation of the plan described in clause (2) above.

The act of September 26, 1968, (181) authorized the establishment of the National Water Commission to consist of seven members who were to be appointed by the President from outside the Federal

Government. The Commission was to review national water resource problems and consult with other water resource agencies during the period ending September 26, 1973.

The Water Resources Research Act of 1964, (65) authorized the financing of water resources research by the several states. The Supplemental Appropriation Act of 1965, (66) as well as subsequent appropriation acts, (180) provides the Office of Water Resources Research with funds to carry out the objectives of the Water Resources Research Act of 1964.

Related Legislation

Land and Mineral Surveys The act of March 3, 1879, (104) established the Geological Survey to classify the public lands and to examine the geological structure, mineral resources, and products of the national domain.

Water Surveys The act of August 18, 1894, (108) was the first to allow funds to the Geological Survey for the purpose of "gauging the streams and determining the water supply of the United States, including the investigation of underground currents and artesian wells in arid and semi-arid sections."

Current appropriation acts (180) authorize the Geological Survey "to perform surveys, investigations, and research covering topography, geology, and the mineral and water resources of the United States, its territories and possessions, as authorized by law (64); classify lands as to mineral character and water power resources; give engineering supervision to power permits and Federal Power Commission licenses," and to "publish and disseminate data relative to the foregoing activities."

Water Developed by Oil and Gas Operations The act of June 16, 1934, (129) provides that where oil and gas prospectors or lessees strike water of usable quality and quantity while drilling for oil and gas, the Secretary of the Interior may purchase the well casing and operate the well. The usability and value of the water are determined by the Geological Survey. (73)

Rights-of-way over the Public Lands for Water Facilities The act of July 26, 1866, (101) provided for free rights-of-way over the public lands for canals and ditches. The act of July 9, 1870, (102) required that patents to public lands contain a

reservation of rights-of-way for ditches and reservoirs acquired by priority of possession.

The act of August 30, 1890, (106) provided that public lands west of the 100th meridian could only be entered or sold if they were made subject to a right-of-way for ditches or canals constructed by authority of the United States. Payment of compensation including severance damage for rights-of-way acquired by the United States in connection with reclamation projects, the construction of which commenced after January 1, 1961, was provided for in the act of September 2, 1964. (202)

Rights-of-way over the public lands were also authorized for municipal water facilities, (19) the development of power, (20) water transportation and the development of power as subsidiary to the main purpose of irrigation, (24) stock reservoirs, (22) and fishways. (29)

Withdrawals of Public Lands for Public Water Reserves The act of June 25, 1910, (115) authorized the President of the United States to withdraw public lands for water power sites and irrigation. Section 10 of the act of December 29, 1916, (120) also authorized the withdrawal of public use of public lands having springs and waterholes. The act of June 16, 1934, (130) permitted the Secretary of the Interior to acquire as a water source any oil or gas well which produced only water.

Indian water rights, as defined by the Winters Doctrine (Winters v. United States), 207 U.S. 564 (1908), is based upon the principle that the United States, at the time Indian reservations were created, reserved the water from streams upon and adjacent to the reservation and exempted them from appropriation under state laws. Such a reservation of the water was not limited to existing uses but included sufficient water for the future requirements of the Indian reservation. Thus, any determination of the extent of the quantity of water necessary for the Indians' use would require a study of present uses as well as future uses for which water may be required.

Public Land Law Review Commission The act of September 19, 1964, (173) provided for a commission to make a comprehensive review of all public land laws and rules and regulations and to determine whether and to what extent revisions thereof are necessary. Thirty-four specific studies have been programmed.

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11. Act of February 8, 1887 (24 Stat. 388, 390).
12. Act of August 11, 1888 § 11 (25 Stat. 400, 425; 33 U.S.C. 608).
13. Act of October 2, 1888 (25 Stat. 505, 526, 527).
14. Act of March 2, 1889 (25 Stat. 939, 960-961).
15. Act of August 30, 1890 (26 Stat. 391).
16. Act of July 13, 1892 (27 Stat. 88, 108).
17. Act of August 18, 1894 (28 Stat. 372, 422).
18. Act of March 2, 1895 (28 Stat. 910, 940).
19. Act of April 24, 1896 (29 Stat. 97).
20. Act of June 3, 1896 (29 Stat. 202, 232).
21. Act of June 11, 1896 (29 Stat. 413, 436).
22. Act of January 13, 1897 (29 Stat. 484).
23. Act of June 4, 1897 (30 Stat. 11, 37).
24. Act of May 11, 1898 (30 Stat. 404).

25. Act of July 1, 1898 (30 Stat. 597, 623).
26. Act of March 3, 1899 (30 Stat. 1074, 1099).
27. Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. § 403).
28. Act of June 6, 1900 (31 Stat. 588, 617).
29. Act of January 14, 1901 (31 Stat. 729).
30. Act of June 3, 1901 (32 Stat. 1133, 1161).
31. Act of June 17, 1902 (32 Stat. 388).
32. Act of June 28, 1902 (32 Stat. 419, 455).
33. Act of April 16, 1906 (34 Stat. 116).
34. Act of June 27, 1906, § 5 (34 Stat. 519).
35. Act of June 25, 1910, 43 U.S.C. 141.
36. Act of February 21, 1911 (36 Stat. 925).
37. Act of July 25, 1912, § 12 (37 Stat. 201, 233; 33 U.S.C. 609).
38. Act of August 9, 1912, § 3 (37 Stat. 265).
39. Act of August 13, 1914, § 12 (38 Stat. 686).
40. Act of February 25, 1920 (41 Stat. 451).
41. Act of June 10, 1920, § 18 (41 Stat. 1063, 1073, as amended; 16 U.S.C. 811).
42. Act of May 25, 1926 (44 Stat. 636; 43 U.S.C. § 423e).
43. Act of January 21, 1927, § 31 (44 Stat. 1010, 1015).
44. Act of December 21, 1928 (45 Stat. 1057).
45. Act of March 4, 1929 (45 Stat. 1562, 1592).
Act of April 9, 1938 (52 Stat. 210).
46. Act of May 18, 1933 (48 Stat. 58).
47. Act of August 30, 1935 (49 Stat. 1028, 1039).
Act of August 20, 1937 (50 Stat. 731).

48. Act of June 22, 1936 (49 Stat. 1570).
49. Act of July 19, 1937, § 1 (5b Stat. 515, 518; 33 U.S.C. 701h).
50. Act of August 28, 1937 (50 Stat. 850).
51. Act of August 28, 1937 (50 Stat. 877; 33 U.S.C. § 701c).
52. Act of May 9, 1938 (52 Stat. 291, 318).
53. Act of May 11, 1938, § 2 (52 Stat. 345, as amended, 16 U.S.C. 756).
54. Act of June 20, 1938, § 1 (52 Stat. 802; 33 U.S.C. 540).
55. Act of June 28, 1938 (52 Stat. 1215, 1222).
56. Act of August 4, 1939 (53 Stat. 1187).
57. Act of June 5, 1944 (58 Stat. 270, 43 U.S.C. 593a-593b).
58. Act of December 22, 1944, § 4 (58 Stat. 887, 889, as amended, 16 U.S.C. 460d).
59. Act of March 2, 1945, § 2 (59 Stat. 10, 11).
60. Act of July 24, 1946, § 1 (60 Stat. 534, 637).
61. Act of July 24, 1946 (60 Stat. 642); 33 U.S.C. § 701p.
62. Act of August 2, 1946 (60 Stat. 847; 33 U.S.C. § 525 et seq.)
- 62-A. Act of June 30, 1948 (62 Stat. 1171).
63. Act of September 30, 1950 (64 Stat. 1109, 42 U.S.C. § 1855).
64. Act of August 23, 1958, and Act of September 5, 1962.
65. Act of July 17, 1964 (78 Stat. 329, 42 U.S.C. § 1961, et seq.)
66. Act of October 7, 1964 (78 Stat. 1023).
67. Act of September 19, 1964.
68. Act of June 14, 1966 (80 Stat. 200).
69. Act of September 7, 1966 (80 Stat. 707).
70. Act of September 30, 1968 (82 Stat. 885, 886).

71. Bonneville Project Act of August 20, 1937 (50 Stat. 731, 16 U.S.C. 852).
72. Arizona v. California, 373 U.S. 546, 600, 601 (1963).
73. 30 CFR 241 (1968) 14 Stat. 251; 43 U.S.C. § 661).
74. California Oregon Power Co. v. Beaver Portland Cement Co. 295 U. S. 142 (1935).
- 74A. Cooley's Constitutional Limitations (8th Ed., Carrington, 1927).
75. DeGeofroy v. Riggs, 133 U.S. 258 (1890).
76. Executive Order No. 8526, August 26, 1940, F.R. 3390.
77. Executive Order No. 103555 of May 26, 1952.
78. Federal Power Commission v. Oregon, 349 U.S. 435 (1955).
79. 27 Federal Register 1534 (1962).
80. 32 Federal Register 239, December 12, 1967, Part II.
81. Fact Finders' Act of December 5, 1924, Subsection D of Section 4 (43 Stat. 702; 43 U.S.C. § 462).
82. Grims Packing Co. v. Hynes, 67 F. Supp. 43 (D.C. Alaska, 1946); affirmed 165 F.2d 323 (9th Cir. 1947).
83. Homestead Act of May 20, 1862 (12 Stat. 392; 43 U.S.C. § 161).
84. House Document 473 (81st Cong. 2d Sess.).
85. House Document 531 (81st Cong. 2d Sess.).
86. Ide v. United States, 263 U.S. 497, 502 (1923).
87. Indian Treaties:

Treaty of July 16, 1855 (12 Stat. 975) Bitter Root, Carlos Band, Flathead, Kutenai, Lower Kalispel, and Pend d'Oreille Tribes (Flathead Reservation).

Executive Orders of June 14, 1867, and November 8, 1873. Agreements of March 26, 1887, and September 9, 1889, and confirmed March 3, 1891 (26 Stat. 1026-1029) Coeur d'Alene, Kutenai, Pend d'Oreille, and Spokane Tribes (Coeur d'Alene Reservation).

Fort Bridger Treaty of July 3, 1868 (15 Stat. 673); Executive Orders of June 14, 1867, and July 30, 1869; Bannock and Shoshone Tribes (Fort Hall Reservation).

Treaty of June 9, 1863 (14 Stat. 642); Agreement of May 1, 1893, ratified by Act of August 15, 1844 (28 Stat. 326) Nez Perce Tribe (Nez Perce [Lapwai] Reservation).

Treaties of January 22, 1855 (10 Stat. 1143) and of December 21, 1855 (12 Stat. 982) Kalapuya, Clackamas, Cow Creek, Lakmuit, Marys River, Molala, Nestucca, Rogue River, Santiam, Shasta, Tumwater, Umpqua, Wapato, and Yamhill Tribes (Grand Ronde Reservation - terminated).

Unratified treaty of August 11, 1855; Executive Orders of November 9, 1855, and December 21, 1865, and Act of March 3, 1875, (18 Stat. 446) - Alsea, Coquille, Kusan, Kwatomi, Rogue River, Skotan, Shasta, Saiustkea, Siuslaw, Tututni, Umpqua, and 13 others--(Siletz Reservation - terminated).

Treaty of June 9, 1855 (12 Stat. 945) and Act of August 5, 1882 (22 Stat. 297); March 3, 1885 (23 Stat. 340) - Cayuse, Umatilla, and Wallawalla Tribes--(Umatilla Reservation).

Treaty of June 25, 1855 (12 Stat. 963) -Des Chutes, John Day, Paiute, Teneino, Warm Springs, and Wasco Tribes- (Warm Springs and Burns-Paiute Reservation).

Order of the Secretary of the Interior, July 8, 1864; Executive Order of October 1, 1886 (Letter Book--152, p. 201 & 153, p. 45)- Chinook (Tsinuk), Clatsop, and Chehalis Tribes- (Chehalis Reservation).

Executive Orders of April 19, 1879, March 6, 1880, and February 23, 1883 (23 Stat. 79)- Columbia (Moses Band-Columbia Reservation).

Executive Orders of April 9 and July 2, 1872 (23 Stat. 79)- Coeur d'Alene, Colville, Kalispel, Okinagan, Lake Methow, Nespelim, Pend d'Oreille, Sanpoil, and Spokane Tribes- Colville Reservation).

Executive Order of September 11, 1893 - Hoh Tribe (Hoh River Reservation).

Executive Order of March 23, 1914, and Act of February 8, 1887 - Kalispel Reservation).

Treaty of Point Elliott, January 22, 1855 (12 Stat. 927) and Executive Orders of October 21, 1864, September 9, 1873, November 22, 1873, and December 23, 1873; Dwamish, Etakmur, Lummi, Snohomish, Sukwamish, and Swiwamish Tribes (Lummi, Tualip, Port Madison, and Swinomish Reservations).

Treaty of Neah Bay, January 31, 1855 (12 Stat. 939) Makah and Quileute Tribes (Makah Reservation).

Treaty of Medicine Creek, December 26, 1854 (10 Stat. 1132) Mockleshoot, Nisqualli, Puyallup, Skwawksnamish, Stailokroom, and five other Tribes (Nisqualli, Puyallup, Mockleshoot, and Squaxin Island Reservations).

Executive Order of April 2, 1893 - Ozette Tribe - (Ozette Reservation).

Treaty of Walla Walla, June 9, 1855 (12 Stat. 951) Klikitat, Paloos, Topnish, Wasco, and Yakima Tribes (Yakima Reservation).

Executive Order of February 19, 1889 (previously designated in Quinault River Treaty, July 1, 1855) - Quileute Tribe (Quileute Reservation).

Treaties of Olympia, July 1, 1855, and January 25, 1856 (12 Stat. 971) - Quinaiett Tribe.

Executive Order of September 22, 1866 - Shoalwater and Chehalis Tribes (Quinault, Cowlitz & Chinook) - Shoalwater Reservation).

Treaty of Point of No Point, January 26, 1855 (12 Stat. 933); and Executive Order of February 25, 1874; Skokomish, Clallum, and Twana Tribes, (Skokomish Reservation).

Act of February 8, 1887, Kootenai Tribe (Kootenai Reservation).

Quinault River Treaty of July 1, 1855, and Executive Order of November 4, 1873, Quinault, Quileute, Chinook and Chehalis Bands (Quinault Reservation).

Indian Reorganization Act of 1934 (Lower Elwha Reservation) by purchase.

Purchase of March 12, 1936, Squamish and Clallam Tribes (Port Gamble Reservation).

Executive Order of January 18, 1881, Spokane Tribe (Spokane Reservation).

88. Joint Resolution of March 28, 1888 (25 Stat. 618, 619).
89. Jones Towing, Inc. v. U.S. 277 F.S. 839.
90. Loc-Wood Boat & Motors v. Rockwell, 245 F.2d 306 (8th Cir. 1957).
91. Louisville Bridge Co. v. U.S. 242 U.S. 409 (1917).
92. Newell, F. H. "First Annual Report of The Reclamation Service," Washington, D. C.: Government Printing Office 1903.
93. Pre-emption Act of September 4, 1841 (5 Stat. 459; 43 U.S.C. § 714).
94. Bureau of Reclamation Project Feasibilities and Authorizations (Washington: Government Printing Office, 1957).
95. Reclamation Project Act of 1939, §§ 4(b) and 9(d) (53 Stat. 1187), as amended by the Act of August 8, 1958 (72 Stat. 542; 43 U.S.C. § 387).
96. 1945 Rivers and Harbors Act, § 3 (59 Stat. 10, 23; 33 U.S.C. § 603a).
97. Senate Document 36 (76th Cong. 1st Sess.).
98. 4 Stat. 22.
99. 4 Stat. 32.
100. 13 Stat. 58, amended by Acts of August 19, 1890 (26 Stat. 320); of February 8, 1895 (28 Stat. 645); of February 19, 1895 (28 Stat. 672); of June 7, 1897 (30 Stat. 96); of May 21, 1948 (62 Stat. 249); and of August 8, 1953 (67 Stat. 497; 33 U.S.C. § 301 et seq.).
101. 14 Stat. 251, 253; 43 U.S.C. § 661.
102. 16 Stat. 218; 43 U.S.C. § 661.
103. 19 Stat. 377; 43 U.S.C. § 321.
104. 20 Stat. 377, 394; 43 U.S.C. § 31.
105. 24 Stat. 388, 390; 25 U.S.C. § 331.
106. 26 Stat. 391, amended by the Acts of September 2, 1964 (78 Stat. 808) and of October 4, 1966 (80 Stat. 873; 43 U.S.C. § 945).

107. 26 Stat. 1095, 1103, amended by the Acts of March 4, 1907 (34 Stat. 1271); June 25, 1910 (36 Stat. 847); August 24, 1912 (37 Stat. 497); and June 7, 1924 (43 Stat. 655; 16 U.S.C. § 471).
108. 28 Stat. 372, 398, 422; 43 U.S.C. § 641, et seq.
109. 30 Stat. 11, 35; 16 U.S.C. § 475.
110. 30 Stat. 1121, 1154; 33 U.S.C. § 414.
111. 30 Stat. 1151; 33 U.S.C. § 403.
112. 32 Stat. 388; 43 U.S.C. § 391, et seq.
113. 34 Stat. 116; 43 U.S.C. § 567.
114. 36 Stat. 269; 270-271; 25 U.S.C. § 384.
115. 36 Stat. 847; 43 U.S.C. § 141.
116. 36 Stat. 925; 43 U.S.C. § 523-525.
117. 36 Stat. 961, amended by Section 6 of the Act of June 7, 1924 (43 Stat. 653, 654; 16 U.S.C. §§ 480, 500, 513-19, 521, 552, and 563).
118. 36 Stat. 961; 16 U.S.C. § 513.
119. 38 Stat. 686; 43 U.S.C. § 499.
120. 39 Stat. 862, 865; 43 U.S.C. § 300.
121. 41 Stat. 451; 43 U.S.C. § 521.
122. 41 Stat. 1063; 16 U.S.C. § 797.
123. 41 Stat. 1009, 1013-1014.
124. 41 Stat. 1063, amended by the Acts of March 3, 1921 (41 Stat. 1353); June 23, 1930 (46 Stat. 797); and August 26, 1935 (49 Stat. 803, 838; 16 U.S.C. § 792, et seq.).
125. 42 Stat. 541; 43 U.S.C. § 511-512.
126. 43 Stat. 653; 16 U.S.C. § 564.
127. 43 Stat. 1132, amended by Section 5 of the Act of April 24, 1950 (64 Stat. 82; 16 U.S.C. § 572).

- 128. 48 Stat. 401; 16 U.S.C. Stat. 661, et seq.
- 129. 48 Stat. 977, amending Act of February 25, 1920 (41 Stat. 437, 441; 33 U.S.C. § 229a).
- 130. 48 Stat. 977; 30 U.S.C. § 229a.
- 131. 48 Stat. 1269; 43 U.S.C. 315, 315a-315r.
- 132. 49 Stat. 163, amended by the Act of February 29, 1936 (49 Stat. 1148; 16 U.S.C. § 590a et seq.).
- 133. 49 Stat. 1148; 16 U.S.C. § 590g-q.
- 134. 49 Stat. 1570 amended by Section 7 of the Watershed and Flood Prevention Act of August 4, 1954 (68 Stat. 666; 33 U.S.C. § 701b).
- 135. 50 Stat. 874; 43 U.S.C. 1181a, 1181c.
- 136. 50 Stat. 874; 43 U.S.C. 1181a, 1181c.
- 137. 50 Stat. 917; 16 U.S.C. § 669, et seq.
- 138. 52 Stat. 291; 43 U.S.C. § 392g.
- 139. 52 Stat. 1215, 1216, 1225; 33 U.S.C. § 701b-1 and j.
- 140. 53 Stat. 1187; 43 U.S.C. § 485h(c).
- 141. 54 Stat. 163; 46 U.S.C. § 526, et seq.
- 142. 54 Stat. 224; 16 U.S.C. § 552a.
- 143. 54 Stat. 1234, 1235.
- 144. 58 Stat. 682, as amended by the Act of July 3, 1946 (60 Stat. 421); of February 28, 1948 (62 Stat. 38); of June 16, 1948 (62 Stat. 469); of June 24, 1948 (62 Stat. 601); of June 25, 1959 (73 Stat. 148); of April 8, 1960 (74 Stat. 34); of July 12, 1960 (74 Stat. 419); of November 3, 1966 (80 Stat. 1180); and by 1953 Reorganization Plan No. 1, Secs. 5 and 8, effective April 11, 1953 (67 Stat. 631); 1966 Reorganization Plan No. 2, effective May 10, 1966 (80 Stat. 1608); and 1966 Reorganization Plan No. 3, effective June 25, 1966 (80 Stat. 1610); 42 U.S.C. § 201, et seq.
- 145. 58 Stat. 887, 905.
- 146. 60 Stat. 641, 653; 33 U.S.C. § 701r.

- 146-A. 60 Stat. 642; 33 U.S.C. 511ff.
147. 60 Stat. 812, 847; 33 U.S.C. § 525 et seq.
148. 60 Stat. 1080; 16 U.S.C. § 661, et seq.
149. 62 Stat. 1155; 33 U.S.C. § 466, et seq.
150. 62 Stat. 1171, 1182; 33 U.S.C. § 701t.
151. 63 Stat. 724, amended by the Act of March 3, 1950
(64 Stat. 11; 43 U.S.C. § 504).
152. 64 Stat. 430; 16 U.S.C. § 777, et seq.
153. 68 Stat. 666, amended by Act of August 7, 1956
(70 Stat. 1088; 16 U.S.C. § 1001, et seq.)
154. 68 Stat. 1243, 1266; 33 U.S.C. § 701g.
155. 69 Stat. 186; 33 U.S.C. § 701n.
156. 69 Stat. 244; 43 U.S.C. § 421b.
157. 70 Stat. 498; 33 U.S.C. § 466a, et seq.
158. 70 Stat. 1044, amended by the Act of September 2, 1966.
(80 Stat. 376; 43 U.S.C. § 422).
159. 70 Stat. 1088; 16 U.S.C. § 1002, et seq., of August 12, 1958.
160. 72 Stat. 297, 319 amended by Act of July 20, 1961
(75 Stat. 204, 210; 43 U.S.C. § 390b).
161. 72 Stat. 563; 16 U.S.C. Stat. 661, et seq.
162. 72 Stat. 567; 16 U.S.C. § 1008, and of September 2, 1958.
163. 72 Stat. 1605; 16 U.S.C. § 1004.
164. 72 Stat. 1754, amended by the Act of August 30, 1961
(75 Stat. 408; 46 U.S.C. § 527 et seq.).
165. 74 Stat. 215; 16 U.S.C. § 215, et seq.
166. 74 Stat. 480, 486; 33 U.S.C. § 577-578.
167. 74 Stat. 480, 500; 33 U.S.C. § 709a.
168. 75 Stat. 204; 33 U.S.C. § 466a, et seq.

169. 77 Stat. 49; 16 U.S.C. §§ 460(1) to 460(1)-3.
170. 78 Stat. 986; 43 U.S.C. 1411.
171. 78 Stat. 890; 16 U.S.C. § 1131, et seq.
172. 78 Stat. 897; 16 U.S.C. §§ 460(1)-4 to 460(1)-11.
173. 78 Stat. 982; 43 U.S.C. 1391-98, 1400.
174. 78 Stat. 986; 43 U.S.C. 1411.
175. 79 Stat. 213; 16 U.S.C. § 460(1)-12, et seq.
176. 79 Stat. 244; 42 U.S.C. § 1962-1, et seq.
177. 79 Stat. 903; 33 U.S.C. § 466, et seq.
178. 79 Stat. 997; 42 U.S.C. § 3251, et seq.
179. 80 Stat. 1246; 33 U.S.C. § 446a, et seq.
180. 82 Stat. 425, 431, 437.
181. 82 Stat. 868; 42 U.S.C.A. § 1962a, note
182. 82 Stat. 906.
183. Tatum v. Blackstock, 319 F.2d 397 (5th Cir. 1963).
184. 33 U.S.C. 403, 404, 407, 409, 414, 415.
185. 33 U.S.C. § 701p.
186. U.S. Constitution, Article I, Section 8, Clause 3.
187. U.S. Constitution, Article I, Section 8.
188. U.S. Constitution, Article II, Section 2.
189. U.S. Constitution, Article IV, Section 3.
190. U.S. Constitution, Amendment 10; Martin v. Hunter's Lessee, 1 Wheat. 304, 325-326 (U.S. 1816).
191. USDI, FWPCA "Program of the Federal Water Pollution Control Administration," July 1967.
192. Union Bridge Co. v. U.S. 204 U.S. 362 (1907)

193. U.S. v. Appalachian Electric Power Co., 311 U.S. 377, 426 (1940)
194. United States v. Arizona, 295 U.S. 174, 184-185 (1935).
195. United States v. Gerlach Live Stock Co., 339 U.S. 725, 738 (1950).
196. United States v. Republic Steel Corp. 362 U.S. 482 (1960).
197. United States v. Rio Grande Irr. Co., 174 U.S. 690, 702, 708 (1899); United States v. 531.13 Acres of Land, Etc., 366 F.2nd 915 (4th Cir. 1966), cert. denied, 385 U.S. 1025.
198. United States v. Willow River Power Co., 324 U.S. 499 (1945); United States v. Commodore Park, 324 U.S. 386 (1945); United States v. Rands, 389 U.S. 121 (1967).
199. Winters v. United States, 207 U.S. 564 (1908).
200. Wyandatte Transportation Co. v. U.S. 885 Ct. 379.
201. Federal Power Commission v. Oregon, 349 U.S. 435 (1955)
202. 78 Stat. 808

TREATIES AND COMPACTS

International treaties relating to the water resources of the Columbia-North Pacific Region date back to the Treaty of 1846 with the United Kingdom settling the northern boundary of the United States west of the Rocky Mountains. Of more significance, however, are the Boundary Water Treaty of 1909 and the Columbia River Treaty of 1961. An interstate compact exists on the Snake River between Idaho and Wyoming. A proposed Columbia River Interstate Compact which has been under consideration for many years, has not been adopted.

Treaties and compacts considered to have a bearing on water and related land resource planning in the region are described in this section.

Treaty with the United Kingdom, June 15, 1846
9 St. 869, 18 Stat. Part 2, 320, Settling the Northern
Boundary of the United States West of the Rocky Mountains

This treaty was signed by the United States and the United Kingdom at Washington, D.C., on June 15, 1846. It was advised by the Senate on June 15, 1846, and ratified by the President on June 19, 1846. Ratifications were exchanged at London on July 17, 1846, and the treaty was proclaimed on August 5, 1846.

Although the treaty primarily deals with boundary settlement, Article I provides in part:

"Provided, however, that the navigation of the whole of the said channel and straits [channel separating the continent from Vancouver's Island and the Fuca's Straits], south of the Forty-ninth parallel of north latitude, remain free and open to both parties."

Article II of the treaty provides:

"From the point at which the forty-ninth parallel of north latitude shall be found to intersect the great northern branch of the Columbia River, the navigation of the said branch shall be free and open to the Hudson's Bay Company, and to all British subjects trading with the same, to the point where the said branch meets the main stream of the Columbia, and thence down the said main stream to the ocean, with free access into and through the said river or rivers, it being understood that all the usual portages along the line thus described shall, in like manner, be free

and open. In navigating the said river or rivers, British subjects, with their goods and produce, shall be treated on the same footing as citizens of the United States; it being, however, always understood that nothing in this article shall be construed as preventing, or intended to prevent, the Government of the United States from making any regulations respecting the navigation of the said river or rivers not inconsistent with the present treaty."

Boundary Waters Treaty with the United Kingdom
(Dominion of Canada), January 11, 1909
36 Stat. 2448, TS No. 548

This treaty established certain agreement with respect to the boundary waters between the United States and Canada which includes the Columbia River. The treaty was signed on January 11, 1909, and advised by the Senate on March 3, 1909. It was thereafter ratified by the President on April 1, 1910, and by Great Britain on March 31, 1910; ratifications were exchanged in Washington, D.C., May 5, 1910; and the treaty was proclaimed by the President on May 13, 1910. The main features of the 14 articles of the treaty are as follows:

1. Defines treaty boundary waters between the United States and the Dominion of Canada.
2. Provides that navigation of all navigable boundary waters and Lake Michigan shall remain free for individuals and to ships, vessels, and boats of both countries subject to specified restrictions.
3. Subject to specified restrictions, reserves to the several state governments and the Dominion or Provincial governments the exclusive jurisdiction and control over the use and diversion over all waters on its side of the line which in their natural channels would flow across the boundary or into boundary waters, but gives any party injured by such diversion the same legal remedy as if such injury took place in the country where such diversion or interference occurred.
4. Establishes International Joint Commission and gives the Commission, along with the United States and the Dominion of Canada, jurisdiction to pass upon certain cases involving uses, obstructions, and diversions of boundary waters.

5. Requires approval of the International Joint Commission to construct or maintain any remedial or protective work or any dams or other obstructions in waters flowing from boundary waters or in water at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary.
6. Provides that boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.
7. Provides for limitations on diversions of waters of the Niagara River affecting the flow of the stream and the level of Lake Erie.
8. Makes special provision with respect to the use with the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan.)
9. Gives the International Joint Commission jurisdiction over certain disputes between the parties to the treaty.

Treaty with Canada Relating to Cooperative Development of the
Water Resources of the Columbia River Basin, January 17, 1961
15 (2) USTI 1553

This treaty was signed by the President of the United States and the Premier of Canada on January 17, 1961, and was ratified by the United States Senate on March 16, 1961. Agreements between the governments relating to carrying out the terms of the treaty were effected by an exchange of notes on January 22, 1964. One exchange was concerned with clarification of certain provisions of the treaty and the other provided for the sale of Canada's power entitlement for a period of 30 years after each treaty project comes into operation. Instruments of ratification of the treaty were exchanged on September 16, 1964.

This treaty was the culmination of planning, study, and negotiation by both the United States and Canada beginning in 1944 when the International Joint Commission, established by the Boundary Waters Treaty of 1909, was requested to investigate and report on whether and in what specific respects cooperative development of the water resources of the Columbia River Basin would be practicable

and in the public interest from the points of view of the two Governments. The main features of the 21 articles of the treaty are as follows:

1. Canada agreed to build within 9 years, storage projects in the Columbia River Basin in Canada at the Arrow Lake, Duncan Lake, and Mica Creek sites. These projects are committed for operation on agreed terms to produce power benefits downstream in the United States which will be shared equally between the two countries. In the aggregate these projects shall reserve up to 8,450,000 acre-feet of space for flood control on May 1 of each year. The United States shall make payments to Canada totaling \$64,400,000 (U.S.) for use of this storage and might make additional payments of up to \$7,500,000 (U.S.) for use of any additional Canadian storage for flood control.
2. The United States agreed to operate all of its existing hydroelectric plants in the Columbia River Basin and any new projects on the main stem of the Columbia River so as to make the best use of the Canadian storage and, therefore, produce the maximum amount of power benefits possible for sharing by the two countries.
3. Canada's entitlement to one-half of the downstream power benefits produced in the United States by Canadian storage is either to be returned to the Canadian border for distribution in Canada or sold in the United States under general conditions agreeable to both countries.
4. The United States is given the option of constructing a dam on the Kootenai River at Libby, Montana. Canada must be notified within 5 years of ratification of the treaty whether the project is to be constructed, and the project must be in full operation within 7 years of that notification. The United States agreed to pay the entire cost of the dam and reservoir in the United States. Canada agreed to provide the 13,700 acres of land that will be flooded on its side of the boundary. For this contribution, Canada gets benefits in flood control and increased power production at Canadian generating plants downstream on the river from Libby after the river re-enters Canada, which will not be subject to sharing with the United States.

5. Except for certain specified diversions of water from the Kootenay River to the headwaters of the Columbia River under specified conditions, the treaty provides that neither Canada nor the United States shall, without the consent of the other, divert for any use, other than a consumptive use, any water from its natural channel in a way that alters the flow of any water as it crosses the Canadian-United States of American boundary within the Columbia River Basin.
6. The treaty also contains provisions regarding the designation of operating entities, the establishment of a Permanent Engineering Board, procedures for settling differences, provisions for restoring the pre-treaty legal position after the treaty has been terminated, and limitations on liabilities for damages.

Treaties with Pacific Northwest Indian Tribes 1853-1864

The United States Constitution provides that treaties made under authority of the United States "shall be the supreme law of the land and the judges in every state shall be bound thereby." U.S. Const. Art. VI, cl. 2. During the period 1853-64, the United States made approximately 14 treaties with Indian tribes of the Pacific Northwest by which these tribes ceded to the United States many square miles of land. Under these treaties, reservations were established and provisions were made for the Indians to fish both on and off the reservations. The treaties generally provided that the Indians were to have the right to fish upon the reservations and also "at all other usual and accustomed stations in common with citizens of the United States," (e.g., Treaty with the Walla-Wallas, 1855). Although the various reservations established pursuant to these treaties are now specifically delineated, the "usual and accustomed stations" at which the Indians had previously fished were not specified in the treaties and their locations remain a matter for factual determination. It is possible that some use of the water or waterways at these locations will be affected by these treaty provisions. The treaties with the Indian tribes of the Pacific Northwest are as follows:

1. Treaty with Rogue River Indians, 1853, 10 Stat. 1018.
2. Treaty with Cow Creek Band, 1853, 10 Stat. 1027.
3. Treaty with Nisqualli, Puyallup Indians, 1854, 10 Stat. 1132.

4. Treaty with Willamette Indians, 1855, 10 Stat. 1143.
5. Treaty with Dwamish and Suquamish, 1855,
12 Stat. 927.
6. Treaty with S'Klallam et al., 1855, 12 Stat. 933.
7. Treaty with the Makah, 1855, 12 Stat. 939.
8. Treaty with Walla Walla, Cayuse, and Umatilla
Tribes, 1855, 12 Stat. 945.
9. Treaty with Yakima, 1855, 12 Stat. 951.
10. Treaty with Nez Perce, 1855, 12 Stat. 957.
11. Treaty with Indians in Middle Oregon, 1855,
12 Stat. 963.
12. Treaty with Quinault et al., 1855, 12 Stat. 971.
13. Treaty with Flathead Indians, 1855, 12 Stat. 975.
14. Treaty with Nez Perce, June 9, 1863, 14 Stat. 647.
15. Treaty with Klamath and Moadac Tribes and
Yahooskin Band of Snake Indians, 1864, 16 Stat. 707.
16. Treaty with Eastern Band Shoshoni and Bannock,
1867, 15 Stat. 673.

Use of Water for Indian Reservations

The United States Supreme Court has held that, in treaties creating Indian reservations, the right to use water from streams and rivers on, or adjacent to, Indian reservations was impliedly reserved by the United States along with the reservation of the land itself. (199) Winters v. United States, 207 U.S. 564 (1908). Further, the quantity of water so reserved was not limited to the amount of water used at the time the Indian reservations were established. Conrad Ins. Co. v. United States, 161 F. 829, 835 (9th Cir. 1908). The United States Supreme Court has also held that, with respect to the rights reserved by the United States for irrigation of Indian reservations, such waters are exempt from appropriation under state law. Winters v. United States, supra.

Snake River Compact (1949)

The Snake River Compact between the States of Idaho and Wyoming was made on October 10, 1949, and ratified by each state in February 1950. Congressional consent to the compact was given in March 1950 (64 Stat. 29). A brief general analysis of the compact indicates that it provides as follows:

1. The right to use the water of the Snake River under the authority of either state shall be subject to the terms of the compact.
2. The water of the Snake River, as determined on an annual water-year basis, is allocated 96 percent to Idaho and 4 percent to Wyoming for storage and diversion purposes, subject to certain exceptions and conditions. Those water rights which have been validly established of record in Wyoming prior to July 1, 1949, and present and future domestic and stock water for use in Wyoming are excluded from the allocations made by this compact.
3. Water from the Snake River shall not be diverted for use in Wyoming outside the drainage area of the Snake River without the approval of Idaho, nor shall water from any tributary of the Salt River be diverted for use outside the drainage area of said tributary without the approval of Wyoming.
4. Water impounded or diverted in Wyoming from the Snake River exclusively for electrical generation shall not be charged to the allocated shares; water impounded for electrical power generation use shall be subservient to the use of such water for domestic, stock, and irrigation purposes.
5. The compact shall be administered by an official from each state who, by unanimous action, may adopt rules and regulations consistent with the provisions of the compact. Such official shall be the official in charge of administering the public water supplies of that state.
6. The provisions of the compact are not to interfere with the right of either state to regulate within its boundaries the appropriation, use, and control of the waters allocated to such state by the compact.

7. Either state may file application for permits to construct dams or storage reservoirs or diversion works in the other state for purposes of conservation and regulating its allocated water, but such state must comply with the law of the other state with regard to such right.

Klamath River Basin Compact (1957)

The Klamath River Basin Compact between the States of Oregon and California was ratified by the Congress on August 30, 1957, (71 Stat. 497). The compact was ratified by the Oregon Legislature in 1957 (Oregon Session Laws, Chapter 142, Section 1) and by the California Legislature in 1963 (California Statutes, Chapter 1059).

Although this compact relates to a basin outside the Columbia-North Pacific Region, it does recognize existing arrangements wherein some of the waters from the Klamath River Basin are diverted into the Rogue River Basin within the region. These arrangements are recognized as vested rights by virtue of their use being established and subsisting under state law as of the effective date of this compact.

Columbia Interstate Compact (Unperfected)

Congress, by Act of July 16, 1952, (66 Stat. 737) gave its consent to the States of Idaho, Montana, Oregon, Washington, and Wyoming to enter into a compact providing for the equitable division and apportionment of the waters of the Columbia River, and all of its tributaries in the states entering into such compact, upon the condition that one qualified person shall be appointed by the President of the United States as a representative of the United States. This congressional consent was modified to include the States of Nevada and Utah by Act of July 14, 1954, (68 Stat. 468).

Several drafts of the proposed compact have been prepared and signed by the compact commissioners; however, not all of the state legislatures have adopted the compact. Negotiations are still in progress.

The Columbia River Fish Compact, Oregon-Washington (1915)

The Columbia River Fish Compact between the States of Oregon and Washington was ratified by Congress on April 8, 1918,

(40 Stat. 515). The compact is set forth in the respective statutes of each state. (ORS 506.010 and RCW 75.40.010)

This compact provides that all laws and regulations now existing, or which may be necessary for regulating, protecting, or preserving fish in the waters of the Columbia River or its tributaries, over which Washington and Oregon have concurrent jurisdictions, or any other waters within either state which would affect said concurrent jurisdiction, shall be made, changed, altered, and amended in full or in part, only with the mutual consent and approval of both states. Nothing in the compact shall be construed to affect the right of the United States to regulate commerce, or the jurisdiction of the United States over navigable water routes.

Pacific Marine Fisheries Commission Compact (1947)

The Pacific Marine Fisheries Commission Compact, between the States of Alaska, California, Idaho, Oregon, and Washington was negotiated under a congressional Act approved July 24, 1947, (61 Stat. 419) as amended by the Act approved October 9, 1962, (76 Stat. 763). It was ratified by the States of California, Oregon, and Washington in 1947, the State of Idaho in 1963, and the State of Alaska in 1968.

The compact relates to the better utilization and protection of the Pacific Coast fisheries (marine, shell, and anadromous) and created the Pacific Marine Fisheries Commission. By entering into the compact, the contracting states agree:

1. To develop a joint program of protection and prevention of waste of such fisheries over which they now have or may acquire jurisdiction.
2. To appoint representatives to the commission.
3. That the commission shall: inquire into methods, practices, circumstances, and conditions for the conservation and prevention of depletion, waste, and abuse of the fisheries; recommend legislation to the states furthering the intents and purposes of the compact, advise pertinent state administrators on problems relating to the fisheries; and recommend and coordinate stocking of the fisheries.
4. That state fisheries research agencies shall act in collaboration as the commission's research agency, and the commission shall establish an Advisory Committee, consisting of representatives

of the commercial fishermen, commercial fishing industry, and others to advise the commission.

5. That the States of Alaska or Hawaii, or any state having streams tributary to the Pacific Ocean, may join the commission by enacting the compact.

FEDERAL AGENCIES

There are many Federal agencies with direct and indirect responsibilities in the management and development of water and related land resources. These agencies are grouped by department, and a short description given of their principal functions and authorities.

Department of Agriculture

The overall responsibility of the Department of Agriculture for river basin study activities and procedures is given to three agencies--Economic Research Service, Forest Service, and Soil Conservation Service--by Section 6, Public Law 566, 83rd Congress, as amended. These agencies are funded in accordance with assigned responsibilities for such studies and coordinated through a Washington Advisory Committee and a Field Advisory Committee, made up of one man from each. The committee is responsible for coordinating within the Department and the Department's activities with other Federal, State, and local agencies and organizations. All three agencies also have other responsibilities pertaining to water and related land resources, as well as other functions.

Economic Research Service

Origin and Background The Economic Research Service has conducted research and investigations in natural resources for many years. Current economic investigations in land and water resource development are part of the continuing program and responsibility of this service. Authority for surveys in regional comprehensive framework studies of the Department is contained in Section 6, Public Law 566, 83rd Congress, as amended.

Economic Research Service has seven divisions. Two divisions are oriented to foreign analysis, development, and trade. The other divisions are Marketing Economics, Farm Production Economics, Economic Development, Economic and Statistical Analysis, and Natural Resource Economics; these divisions have both Washington and Field staffs. They are concerned with research and investigations of

national, regional, and localized agricultural and related problems. A highly important program at the national level is the projections of demand for agricultural and forestry goods and services that are being done for the Water Resources Council for use in Type 1 and Type 2 regional studies.

Purpose and General Responsibility Active participation in Type 1 studies and other river basin investigations is by personnel of the Natural Resource Economics Division of the Economic Research Service. The Charter of the Natural Resource Economics Division reads as follows:

"Administers national and regional programs of research, planning, and technical consultation and services on economic and institutional factors and policy related to the use, conservation, development, management, and control of natural resources, including extent, geographic distribution, productivity, quality, and the contribution of natural resources to regional and national economic activity and growth; resource requirements, development potentials, and resource investment economics; ownership and tenure rights; national, interstate, and local resource organizations; impact of technological and economic change on the utilization of natural resources; resource income distribution and valuation; recreational use of resources; and the economics of man's use and management of his environment."

Policy The Economic Research Service participates in departmental and interagency efforts to formulate policies, plans, and programs for the use, preservation, and development of natural resources.

Organization and Programs The Economic Research Service is one of three agencies in the Department of Agriculture responsible for meeting the obligations of the Department of Agriculture under the Comprehensive Framework Study Program of the Federal Water Resources Council. Within this program, ERS is conducting investigations in the Columbia-North Pacific area of economic aspects of agricultural industries and closely related processing and service industries. Economic projections of these industries and related needs for water and land are important elements of these surveys. The investigations are carried out within the general framework and guides of Senate Document 97, 87th Congress, and the Water Resources Planning Act of 1965.

Forest Service

Origin and Background The Forest Service was organized under the Department of Agriculture by the act of February 1, 1905.

The original charge to the Forest Service was taken from several existing pieces of legislation which, basically, charged the Forest Service with the responsibility for promoting the conservation and best use of the Nation's forest lands. This involved improvements to land and resources; protection from fire, insects, and disease; management of the resources for orderly and continuous service, and for the maintenance of stable economic conditions in dependent communities. The most important of these acts, with relation to watershed management, was the Organic Act of 1897. This act, in providing for the management of the national forests, states that one of its objectives is to secure favorable conditions of waterflows.

A number of other Federal laws developed during the period 1900-1960 relate to national forest management. The application of these resulted in the twin conservation policies of multiple use and sustained yield. Congress, in 1960, gave legislative confirmation to these two guiding principles by passage of the Multiple Use-Sustained Yield Act, which directs that the national forests be developed and administered for their several basic products and services; i.e., outdoor recreation, range, timber, watershed, wildlife, and fish. The act of 1960 further states, "The Secretary of Agriculture is authorized and directed to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom."

Purpose and General Responsibility The Forest Service is responsible for applying sound conservation and utilization practices to the natural resources of the national forests and national grasslands. It also has the responsibility of promoting scientific forest management practices among all forest landowners through example, cooperation, research, and the dissemination of information.

The purpose of watershed management is to make favorable the contribution of the soil and water resources to the multiple use and sustained yield development and management of forest lands. In furtherance of this purpose, the following watershed management objectives are established:

1. Design and apply management practices on national forest watersheds to improve the quality, quantity, and timing of water yield for onsite national

forest purposes, and to meet the needs of downstream water uses.

2. Establish the right to use of a sufficient quantity of usable water to permit the long-term development of national forest system resources, with due consideration for the needs of other water users.
3. Conduct national forest activities in a manner to avoid pollution of return flows which would cause impairment for intended downstream water uses.
4. Manage watersheds which are a direct source of domestic water supply in such a manner that raw water is yielded of sufficiently high quality to permit its use, after reasonable treatment, for domestic purposes.
5. Harmonize water resource development projects with the development and management of related national forest system lands to achieve compatible multi-purpose development.
6. Obtain and provide soil and hydrologic information needed for protection, development, and management of national forest system lands in a manner which will preserve or improve the soil and water resources.
7. Rehabilitate damaged watersheds to restore soil stability, soil productivity, and proper hydrologic functioning of the watershed.
8. Improve hydrological conditions on non-Federal forest and rangelands through cooperative Federal-State and local action programs.
9. Through research, develop methods and techniques for improving forest and related range watersheds.

Policy The following policies are established to achieve watershed management objectives consistent with multiple-use sustained yield principles.

1. A watershed management plan will be prepared for each national forest watershed for which a comprehensive plan is not available.
2. Soil surveys will be made to the standards of and coordinated with the National Cooperative Soil Survey of the Soil Conservation Service.

3. Hydrologic analysis and water resource prescriptions will be prepared as the initial step in preparing comprehensive watershed plans.
4. A barometer watershed will be established in each hydrologic province to provide basic data on national forest water resource yields, to evaluate land-use, water-yield interrelationships, and to determine the effect of applied water resource prescriptions on water yields.
5. National forest water use requirements, quantity, and quality, will be based on the projection of national forest multiple-use plans. Planned national forest water use will fully consider the needs of other water users in areas of water scarcity. Particular care will be given to provide for efficient utilization of water, and to make sure return flows are unimpaired for intended downstream uses.
6. Municipal water supply watersheds will be managed in accordance with a special management plan designed to yield high quality raw water.
7. The Forest Service will cooperate with other Federal and State agencies, other organizations, and individuals in water resource development on national forest system lands.
8. Potential and existing soil and water problems will be considered in planning, management, and development of all national forest system resources. The measures needed to adequately protect soil and water resources during the conduct of other activities will be taken. Existing or proposed uses and activities will be modified as specified in multiple-use plans to meet watershed projection objectives.
9. Where soil or water resources have been damaged by fire or other factors, the damaged watersheds will be rehabilitated as promptly as funds permit.
10. The Forest Service will cooperate with Federal, State, and other local agencies and organizations, and with private landowners, in other programs of mutual interest for water resource management and watershed protection.

Organization and Programs Work of the Forest Service includes three major activities: (1) management of the national forests and national grasslands; (2) forestry research; (3) cooperation with state and private forest owners.

Perhaps the program best known to the public is the administration of the federally owned lands that make up the national forest and national grassland system. The Columbia-North Pacific Study embraces three Forest Service administrative regions with headquarters and area noted as follows:

| <u>Forest Service Region</u> | <u>Headquarters</u> | <u>Acres National Forests & National Grasslands</u> |
|---------------------------------------|---------------------|-----------------------------------------------------------------|
| Region 1, Northern Region | Missoula, Montana | 16,817,900 |
| Region 4, Intermountain Region | Odgen, Utah | 15,921,000 ^{1/} |
| Region 6, Pacific Northwest Region | Portland, Oregon | 21,667,300 ^{2/} |
| TOTAL | | 54,406,200 |

^{1/} Includes 3,600 acres national grasslands.

^{2/} Includes 103,000 acres national grasslands.

Each region is directed by a Regional Forester who is responsible to the Chief of the Forest Service for all regional activity except research. Each national forest is supervised by a Forest Supervisor, who is responsible to the Regional Forester. The national forests are subdivided into management units commonly designated as ranger districts, each of which is administered by a District Ranger, who answers to the Forest Supervisor. The line organizations include functional staffing according to job loads and complexities. The Forest Service follows a policy of decentralization to the lowest practical level to obtain effective on-the-ground use and management of forest lands.

The Pacific Northwest Forest and Range Experiment Station, Portland, Oregon, and the Intermountain Forest and Range Experiment Station, Odgen, Utah, provide leadership and the scientists to carry out the Forest Service research program in the various subregions of the Columbia-North Pacific Region. These scientists study the establishment, improvement, growth, and harvesting of timber; protection of forests from fire, insects, diseases, and animal pests; management of rangelands; improvement and management of wildlife habitat; forest recreation; protection and management of watersheds; efficient marketing and utilization of forest products; forest engineering; and forest economics. A continuing

forest survey provides comprehensive information on the extent and condition of forest lands, the volume and quality of timber resources, trends in timber growth and harvest, and the outlook for future supplies and demands.

The program of Cooperative State and Private Forestry, the third major activity of the Forest Service, is conducted as Federal-State cooperative programs through the State Forester in each state. These programs include fire protection, detection and control of pests and diseases, cooperative production of forest tree planting stock for reforestation, and farm forestry projects.

Under Public Law 566 the Forest Service participates with the Soil Conservation Service, State Foresters, and others in small watershed projects and river basin studies.

Soil Conservation Service

Origin and Background Congress made appropriations in 1929 for creating soil conservation experiment stations at certain land grant colleges. In 1933, Congress established the Soil Erosion Service and Dr. Hugh Hammond Bennett was named Chief. He continued to head the Soil Conservation Service when it was created by the Conservation Act of 1935 (Public Law 46) and established in the Department of Agriculture. Conservation was now recognized as a national problem.

Some other principal legislative authorities under which the Soil Conservation Service operates are: the Omnibus Flood Control Act (Public Law 738, 74th Congress, 1936); the Flood Control Act (Public Law 534, 78th Congress, 1944); the Watershed Protection and Flood Prevention Act (Public Law 566, 83rd Congress, 1954) as amended; and Resource Conservation and Development Projects (Section 102 of the Food and Agriculture Act of 1962, Public Law 87-703).

It soon became apparent that local participation and control were essential for an action program of conservation; thus the concept of soil conservation districts originated. These districts are organized under various state laws and are autonomous and governed by locally elected supervisors who serve without pay. Each district is responsible for soil and water conservation within its boundaries, much as a county is responsible for its roads or a school district for education.

Each soil and water conservation district can enter into a memorandum of understanding with the Secretary of Agriculture and supplemental memorandums of understanding with Departmental agencies

such as the Soil Conservation Service, or with other public or private entities to carry out its purposes.

The Soil Conservation Service channels its on-the-ground assistance to landowners through soil and water conservation districts. This assistance consists primarily of professional help in planning and applying practical conservation measures needed for each kind of land and operation.

Such districts have served to improve the water and land use on several million acres across the country, and have had a major effect on the lives of the American people.

Purpose and General Responsibility The Soil Conservation Service is the agency of the Department of Agriculture which is responsible for developing and carrying out a national program of conserving land and water resources. The central objective is an integrated system of land use and conservation treatment in harmony with the capabilities and needs of the land. This is accomplished by unified planning that combines all of the technologies, considers all resources, and recognizes all the human interests that apply to each area of land.

The problems of conservation will always remain, and in many ways become more complex, because people make the land and water use decisions, often without adequate knowledge of the consequences. The difficulties of creating public awareness and support increase as the population increases. Exploitation of resources is less a rural problem and increasingly an urban problem since the sprawling cities, roads, and factories use a larger share of the resources. One increasing factor is the safe disposal of waste, runoff water, and products from factories and urban areas into the soil and water that surround them.

The technical assistance available throughout the Soil and Water Conservation Districts includes:

1. Soil Surveys that provide an inventory of the soil resources to be used for conservation planning and application with individuals, groups, and organizations. To provide soils information and interpretations to community planners and prepare the way for reasonable and beneficial land use changes and assure the acceptance of sound land use planning.
2. Assistance to individual and groups of landowners, operators, and organizations in the formulation of their conservation plan which delineates the needs

of the land and the application of conservation practices in the fields of engineering, agronomy, geology, woodland, soils, biology, plant materials, recreation, and water forecasting to meet these needs.

3. Assisting local organizations develop and apply work plans under the Watershed Protection and Flood Prevention Act (P.L. 566) for the overall solution of flood and water management problems.
4. Responsibility for leading the planning and for providing technical assistance to Resource Conservation and Development projects.
5. Participation with other Federal and State agencies in making surveys and investigations of river basins and other watersheds and has leadership responsibility for USDA participation in these activities. These studies provide the basis for developing coordinated programs for the orderly development, management, and use of water and related land resources of the basins.
6. Encouragement, assistance, and cooperation with local people, organizations, Federal, State, and local agencies in broad resource area planning in the community, area, or region. The giving of technical assistance and guidance in the preparation of plans for the orderly and effective development of soil, water, and related resources in proper relationships to the total social and economic needs.
7. Operating plant material centers in cooperation with the states to assemble, screen, and increase plant materials that have possible value in soil and water conservation.
8. Technical assistance on permanent type conservation practices of the County Agricultural Conservation program.
9. Cooperative snow surveys and seasonal water supply forecasts.
10. Technical information and consultation to private engineers, architects, contractors, other agencies, organizations, and individuals on soil and related water resources.

Policy The policies of the Service are to encourage the wise use and conservation of water and related land resources. These policies are activated by providing technical information, planning, engineering services, and financial assistance for application by responsible people and local organizations.

Organization and Programs The Soil Conservation Service is the Department of Agriculture's Technical Agency for developing and carrying out a national soil and water conservation program.

The Administrator and his staff in Washington, D. C., through 50 State Offices and two territorial offices, give technical and administrative leadership to field personnel in over 260 area offices and more than 3,000 work units whose staffs work directly with land-owners and operators and with rural and urban groups. It employs professional soil conservationists, soil scientists, engineers, hydrologists, economists, geologists, biologists, and all kinds of plant technologists.

The Columbia-North Pacific Region has land under the jurisdiction of seven State Offices, including 19 area offices. The Service is giving technical assistance to all 202 Soil and Water Conservation Districts in the region.

The present status of the Resource Conservation and Development projects in or partly in the region is itemized as follows:

| | |
|-------------------------|----|
| Applications received | 10 |
| Authorized for Planning | 5 |
| Approved for operation | 5 |

The present status of small watershed projects under the Watershed Protection and Flood Prevention Act (P.L. 566) in the region is listed as follows:

| | |
|---------------------------|-----|
| Applications received | 145 |
| Authorized for planning | 47 |
| Approved for construction | 19 |
| Completed | 5 |

In the Columbia-North Pacific Region Study, the Soil Conservation Service is primarily interested in identifying land and water management and development needs and potentials, and in determining effective means to satisfy the needs.

Other Agencies

THE DEPARTMENT OF AGRICULTURE HAS SEVERAL OTHER AGENCIES THAT ALSO HAVE RESPONSIBILITIES IN THE WATER RESOURCES FIELD

Agricultural Stabilization and Conservation Service The Agricultural Stabilization and Conservation Service administers varied agricultural programs, as follows:

1. Conservation and land-use adjustment assistance, through sharing with individual farmers the cost of installing needed soil, water, woodland, and wild-life conserving practices through the Agricultural Conservation Program, and through adjustment and cost-sharing payments under the Cropland Adjustment Program, Cropland Conversion Program, and the Conservation Reserve Program of the Soil Bank.
2. Price support, through commodity loans and payments to farmers, or through direct purchases of agricultural commodities from farmers and processors.
3. Production adjustment, through marketing quotas, acreage allotments, and land diversion payments for a number of commodities, including wheat, corn, and feed grains, and through incentive payments for sugar, a commodity in which the Nation is not self-sufficient.
4. Disaster relief, through which direct assistance to farmers and ranchers whose supplies have been destroyed or whose farmlands have been seriously damaged by widespread flood, drought, or other natural disasters, and assistance in preparedness and planning for civil defense purposes.
5. Management of inventories of the Commodity Credit Corporation, through sales, payments-in-kind, donations, storage, and related processing and shipping arrangements.

Agricultural Research Service The Agriculture Research Service is the major scientific research agency of the Department of Agriculture. This service is charged with the responsibility for the conduct of fundamental and applied research in the physical, biological, engineering, and agricultural sciences. Research and regulatory activities are organizationally grouped into five major areas, as follows:

The Utilization Research and Development activities are directed toward the discovery and development of new or improved uses for and methods of utilizing agricultural commodities of all types.

Farm Research is concerned with matters relating to farming practices and the production of agricultural commodities.

The Regulatory Programs are concerned with measures for preventing the introduction of and controlling the spread of animal and plant diseases and plant pests.

The Experiment Stations Divisions of ARS administer the Federal acts granting funds for the support of research conducted by state and territorial agriculture experiment stations.

The Institute of Home Economics conducts a research on matters relating to human nutrition, household economics, and clothing and housing.

Research needs to solve local soil and water conservation problems are submitted annually to ARS by the Extension and Soil Conservation Services. These needs are organized by categories and priority, and research is initiated and carried out as funds and resources are available.

Cooperative Extension Service Authorized by the Smith-Lever Act, as amended, Public Law 83-85, May 8, 1914, 38 Stat 372, 7 U.S.C.A. 341-343. This act defines the purpose as to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same.

Cooperative Extension is a combined effort of county, State, and Federal administration and financing. The work is essentially an off-campus education and information program, carried forward by County Extension Agents officed throughout the state. The County Extension Agents are employees of the State Land Grant College or University and are assisted by extension specialists of the Land Grant College or University.

The education provided by the Extension Service is an informal and distinct type directed to helping people solve day-to-day problems. It is education for action, and is directed toward helping individuals make sound decisions to:

1. Protect and develop natural resources.
2. Pursue better systems of management on farms and related businesses.
3. Improve living and home environment.
4. Develop a better community in which to live.

5. Develop increased ability and willingness, by both adult and youth, to assume leadership and citizenship responsibilities.

Farmers' Home Administration Credit extended by the agency supplements, but it does not compete with loans made by private and cooperative lenders. Most loans are made for operation, purchase, and improvement of family-type farms.

Operating loans, that help farmers make better use of land and labor resources, are made for the purchase of equipment, feed, seed, fertilizer, livestock, and other farming needs including family subsistence. Loans are to be repaid as early as possible, not exceeding 7 years. Maximum operating loans may not exceed \$35,000.

Farm ownership loans are made to help farmers buy land, improve land and buildings and refinance debts. Loans are made from private capital and insured by the Government or from appropriated funds. Loans are made for periods not to exceed 40 years but can be repaid in less time through larger payments in good years. A borrower's total indebtedness on the farm, including the loan being made, may not exceed \$60,000.

Soil and water conservation loans are made to eligible individual farm operators and owners to develop, conserve, and make better use of their soil and water resources. A borrower's total indebtedness on the farm, including the loan being made, may not exceed \$60,000.

Water and waste disposal system loans and grants for the construction of rural community water and waste disposal systems are made to public bodies and nonprofit organizations. The group's total indebtedness for these loans together with any assistance in the form of a grant cannot exceed \$4 million. Grants may be made, of not over 50 percent, to eligible groups for development costs. The projects can serve residents of open country and rural towns of not more than 5,500 population.

Similar loans can be made for the development of rural recreation areas including facilities for swimming, golfing, boating, fishing, and camping.

Loans to rural groups for soil and water conservation and shifts in land use are made to eligible groups of farmers and ranchers, to develop irrigation systems, drain farmland, and carry out soil conservation measures. Loans may also be made for shifts in land use to develop grazing areas and forest lands.

Emergency loans are made to eligible farmers in designated areas where natural disasters such as flood and droughts have brought about a temporary need for credit not available from other sources.

Watershed loans are made to local organizations to help finance projects that protect and develop land and water resources in small watersheds. Loans are to be repaid within the shortest time consistent with repayment ability, within a 50-year limit. Loan funds may be used to pay the applicant's share of the cost of flood control dams and reservoirs, water supply reservoirs, rural water supply distribution systems, diversion dams, irrigation canals, drainage facilities, recreation facilities, easements, and similar purposes.

Resource conservation and development loans are available to public agencies and private nonprofit corporations for natural resource conservation and development, including outdoor recreation facilities in designated areas.

Rural Electrification Administration The Rural Electrification Administration administers two loan programs: (1) for rural electrification facilities, and (2) for extension and improvement of rural telephone service. Loans for rural electrification are made to cooperatives, public utility districts, municipalities, and power companies to finance electric generation, transmission, and distribution facilities in order to bring electricity to persons in rural areas not receiving central station electric service.

The Rural Electrification Act provides that, in making electric loans, preference shall be given to cooperatives and other nonprofit organizations. It also authorizes loans to finance the wiring of rural establishments and purchase of electrical equipment by those receiving service. Administration electric loan funds have been lent to locally owned, member-controlled cooperatives organized under state laws. All Rural Electrification Administration loans are self-liquidating. Loans are made on a maximum 35-year amortization basis with interest at 2 percent.

The administration maintains no field offices. It has, however, a field staff of engineers, accountants, management advisors, and telephone specialists.

Department of the Army

Regulations for Navigation of Waters

Pursuant to 33 U.S.C. 1 the Secretary of the Army prescribes regulations for the use, administration, and navigation of the navigable waters of the United States, as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other executive department.

Corps of Engineers

Origin and Background The Corps of Engineers represents the Department of Army in water resource planning, construction, and operation. Congress established the Corps in 1775 as the construction branch of the Army, and for many years, it was the only engineering organization available to the Government. Thus, the Corps was called on to conduct explorations, establish routes for roads and canals, and serve as advisor to both the President and Congress in the civil aspects of engineering. The Federal responsibility for river and harbor improvements for navigation has been a Corps function since 1824, and, with the establishment of the Mississippi River Commission in 1879, the Corps entered the flood control field by starting the construction of the continuous levee system along this river.

In 1894, Congress formally established the Corps of Engineers' civil functions and assigned engineers to undertake studies in unexplored regions for improvement of transportation routes. In 1908, during the administration of President Theodore Roosevelt, Congress directed the Corps to undertake full-range water resource planning, including the development of comprehensive plans for river basins. During the ensuing 2 decades, the Corps studied most of the main river basins of the country, and the resulting reports were published as H.D. 308, 69th Congress, 1st Session. These reports, which considered improvements for navigation, hydroelectric power, flood control, and other water uses, are generally accepted as the beginning of modern river basin planning. Control of flooding in the major rivers of the country was accepted as a Federal responsibility and assigned to the Corps of Engineers by the Flood Control Act of 22 June 1936. The Flood Control Act of December 22, 1944, made it the duty of the Secretary of War to prescribe regulations for the use of storage allocated to flood control or navigation at all reservoirs constructed wholly or in part by Federal funds. The Corps of Engineers carries out this responsibility.

In its nearly 200-year history, the Corps of Engineers has improved some 22,000 miles of inland and intracoastal waterways, of which 19,000 miles are currently in commercial use. Major Federal participation in flood control began in 1928, when the Corps initiated work on the Mississippi River system. To date, there are about 1,000 major Corps projects now fully or partially effective for flood control, and already the works have prevented over \$16 billion of flood damages. Hydroelectric power development at Corps of Engineers projects contributes over 20 percent of the Nation's hydroelectric power.

In the Columbia-North Pacific Region, the Corps of Engineers has built massive jetties at five deep-draft harbors and nine shallow-draft harbors along the coast of Oregon and Washington. Over 700 miles of waterways have been improved and 32 boat harbors completed. Navigation is a primary function of eight Corps of Engineers dams on the Columbia and lower Snake Rivers. Also, in this region, flood control works have prevented damages of approximately \$935 million, of which about \$915 are in the Columbia River drainage basin. At the end of calendar year 1969, power installations at existing Corps of Engineers projects had a capacity of 6,117,000 KW and an additional 3,177,000 KW were under construction. Water stored in Corps of Engineers reservoirs in the Willamette Basin has been a major contributor to the cleanup and the restoration of fall salmon runs in that stream. Corps projects also provide for water-based recreation, enhancement of resident fisheries, and stored water for various conservation uses. The following paragraphs outline specific Corps of Engineers purposes and responsibilities in the field of water resource development.

Purpose and General Responsibility The Corps of Engineers is the agency having basic jurisdiction over Federal investigations and improvements of the Nation's navigable waterways, ". . . except as otherwise provided by act of Congress." 33 U.S.C. Sec. 540. Thus, the potential involvement of the Corps in water resource development and conservation is great. Major civil works projects for navigation, flood control, beach erosion control, and related purposes are authorized or directed by Congress and prosecuted by the Department of the Army through the Corps of Engineers. In addition, the Corps prescribes regulations for the use, administration, and navigation of U. S. navigable waters. 33 U.S.C. Sec. 1. Cooperation with other Federal agencies in water conservation and utilization projects and outdoor recreation programs is emphasized. Other agencies are generally consulted at the planning stage of Corps projects; e.g. pursuant to 16 U.S.C. Sec. 469(a), the Corps must inform the Secretary of Interior of planned dam constructions so that the Secretary can advise the Corps on preservation of historical and archeological data. Conversely, the Corps is usually involved at some point in water projects pursued by other government

agencies or private parties; e.g., before the Federal Power Commission can grant a license for construction of a dam, conduit, or reservoir, the plans for such project must be approved by the Corps, at least insofar as they affect navigation.

General Flood Control The United States Government has long been concerned with flood control. In a statutory declaration of policy, Congress states: "It is recognized that destructive floods upon the rivers of the United States . . . constitute a menace to national welfare Flood control on navigable waters or their tributaries is a proper activity of the Federal Government" 33 U.S.C. Sec. 701(a). Flood control and the Federal jurisdiction were defined in 33 U.S.C. Sec. 701(a) - 1. "The words 'flood control' . . . shall be construed to include channel and major drainage improvements and Federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and shall be prosecuted by the Department of the Army"

Investigations and Planning Studies Investigations are made at Federal expense except for use of suitable locally developed data. Each investigation that considers major problems or projects is specifically directed by Congress. The directive may be included as part of an omnibus river and harbor or flood control act, or may consist of a resolution by one or more of the civil works committees. The directive specifies the scope of the study, which may include an entire river basin, and considers all aspects of water resource development, or may be limited to a specific location and improvement for a single purpose such as a levee to protect a small town. The studies--detailed studies are called surveys--consider the needs of the study areas and recommend appropriate projects. Results are presented in survey reports to Congress and, when approved, become the basis for authorization for construction of the projects.

Design and Construction Projects are undertaken when authorized by Congress. The scope of and requirements for Federal participation have evolved through a long series of river and harbor and flood control acts. Corps projects are basically for improvement of navigation, control of flood waters, or beach erosion control, but power, irrigation, municipal and domestic water supply, water quality control, recreation, and fish and wildlife enhancement may be included as project purposes when appropriate. Local participation and/or repayment of a portion of project costs is required on all projects except navigation and major flood control storage projects. The extent of such local participation is defined in the survey report on the basis of the nature and extent of expected local benefits, prevailing cost sharing criteria, and precedent set by recent projects of similar nature.

Operations and Maintenance The Corps is the largest operator of reservoirs and water resource projects in the Pacific Northwest. Some of the smaller single-purpose projects built by the Corps are transferred to agencies of state or local governments to maintain and operate, for example the small boat basin at Seattle and levees maintained by diking districts. All large multipurpose projects built by the Corps continue to be operated by the Corps. Each project must be operated for the purposes designated in its original authorizing legislation unless Congress approves a subsequent modification. A Reservoir Control Center in the Division Office regulates certain larger reservoir projects of wider influence and overlapping interests; whereas District Offices operate the bulk of the water resource developments built by the Corps.

Emergency and Continuing Programs Congress has given the Corps continuing authorities to undertake certain routine and emergency measures without specific authorization. With the exception of Emergency Operations and Disaster Relief, all projects constructed under these authorities must be complete within themselves and be economically justified. These authorities are as follows:

1. Small Flood Control Projects: Section 205 of the 1948 Flood Control Act, as amended, provides authority to the Chief of Engineers to construct small flood control projects that have not already been specifically authorized by Congress. Each project selected must be limited to a Federal cost of not more than \$1 million. A local sponsoring agency must agree to provide items of local cooperation similar to those for specifically authorized flood control projects and to assume all costs in excess of the Federal limitation of \$1 million.
2. Small Navigation Projects: Section 107 of the Rivers and Harbors Act of 14 July 1960 (P.L. 86-645), as amended, provides authority for the Chief of Engineers to develop, construct, and maintain small navigation projects that have not previously been specifically authorized by Congress. A local sponsoring agency must agree to provide all normal items of local cooperation for navigation projects of similar nature and to assume all costs in excess of the Federal cost limit of \$500,000.
3. Small Beach Erosion Control Projects: Section 103 of the Rivers and Harbors Act of 1962 (P.L. 87-874), as amended, provides authority for the Chief of Engineers to develop and construct small shore and beach restoration and protection projects that have

not been specifically authorized by Congress. Each project under Section 103 is limited to a Federal cost of not more than \$500,000, including any Federal share of periodic nourishment cost. Local cooperation is otherwise the same as for regularly authorized larger beach erosion control projects.

4. Snagging and Clearing Projects:

a. Flood Control: Section 208 of the 1954 Flood Control Act (P.L. 780, 83rd Congress) authorizes clearing and straightening of stream channels and the removal of accumulated snags and other debris in the interest of flood control. The maximum Federal expenditure per project is limited to \$100,000; therefore, a local sponsoring agency must agree to provide all normal items of local cooperation for flood control projects of similar nature and to assume all costs in excess of the Federal limit of \$100,000.

b. Navigation: Pursuant to 33 U.S.C. 603a, \$300,000 may be expended in any year on the same type of work in the interest of navigation.

5. Protection of Essential Highways, Highway Bridge Approaches and Public Works: Section 14 of the 1946 Flood Control Act provides special authority to the Chief of Engineers to construct bank protection works to protect endangered highways, highway bridge approaches, and other essential or important public works, such as municipal water supply systems and sewage disposal plants, which are endangered by flood-caused bank erosion. A local sponsoring agency must agree to provide all normal items of local cooperation for local flood control projects and to assume all costs in excess of the Federal limit of \$50,000.

6. Emergency Operations: Flood, hurricane, and storm emergency operations, including advance planning, patrolling of levees, flood fighting, rescue operations, emergency repairs and protection of Federal projects, and supplementation of local efforts upon request in emergencies, are authorized by the Flood Control Act of 18 August 1941, as amended by Public Law 99,

84th Congress and other acts. While emergency repairs of non-Federal flood control works are permissible, the law does not extend to reimbursement of local expenditures for flood fighting or post-flood repairs and improvements. Primary responsibility for disaster fighting rests with local interests. The Corps encourages proper local maintenance of protective works and advance preparation for emergencies, including stockpiling of material and training of personnel. Local cooperation, substantially as required for regular flood control projects, is required for emergency rehabilitation work under Public Law 99, and local interests are required to assume all costs for repairs which constitute betterments or accomplishment of deficient local maintenance.

7. Disaster Relief: The Corps cooperates with the Office of Emergency Preparedness in administering relief in connection with major disasters when determined to be such by the President.

Flood Plain Management Services Section 206 of the Flood Control Act of 1960 (P.L. 86-645) authorizes the Secretary of the Army to compile and disseminate information on floods and flood damages at the request of state and responsible local governmental agencies, and to provide guidance in local planning for the use of flood plains and engineering advice on reducing flood hazards.

Pursuant to authority contained in 33 U.S.C. 633, the Chief of Engineers under the direction of the Secretary of the Army can protect, alter, reconstruct, relocate, or replace governmental facilities to meet requirements of navigation or flood control. Pursuant to 33 U.S.C. 701g, the Chief of Engineers may repair and protect highways, railroads, and utilities damaged by operation of dams or reservoirs.

Information of flood hazards is furnished to state and responsible local governmental agencies through flood plain information reports which define the flooding limits and depths of past floods and of larger floods that can reasonably be expected to occur. A specialized service furnishes guidance on flood proofing and defines flooding limits and depths for specific buildings and for proposed construction projects in areas not presently covered by flood plain information reports. The service also includes assistance for local governmental agencies in drafting flood plain regulations and zoning ordinances and defining floodway limits and storage areas.

Navigability of Waterways The Army Corps of Engineers has been given the duty of maintaining and developing the navigability of the Nation's waterways. The following are some of the ways in which the Corps exercises this jurisdiction.

1. Submission to the Corps of all plans for projects affecting the navigability of the Nation's waterways is required by 33 U.S.C. Sec. 401.
2. Obstruction of navigable waters without Corps' permission is generally prohibited by 33 U.S.C. Sec. 403, and deposit of refuse in navigable waters is prohibited by 33 U.S.C. Sec. 407, insofar as such refuse constitutes an obstruction to navigability. The Corps has the authority to develop regulations to govern the dumping of refuse into navigable waters under Sec. 419.
3. The Corps of Engineers may remove or cause the removal of all sunken water craft by authority of 33 U.S.C. Sec. 414, and said authority is extended to all craft obstructing navigation by Sec. 415.
4. Corps' approval is required before any bridge is built over a navigable waterway. 33 U.S.C. Sec. 491 and Sec. 525. The Corps may alter or cause to be altered any bridge which obstructs navigation, (Sec. 494) (Sec. 513), or any bridge abutment which causes the flow of a river to injure a riparian owner. (Sec. 500)

Policies The primary civil works function of the Corps is to work with state and local agencies to maintain and improve channels and harbors for navigation and to prevent or reduce damages from flooding and beach erosion. Normally, problem areas are identified by a local sponsoring agency and assigned to the Corps by Congress. Prior to undertaking an improvement, problem areas are studied to select the best plan of improvement and to determine feasibility. Study results are presented in survey reports. Each survey report enumerates the benefits to be derived from any proposed works and recommends appropriate items of local cooperation. In most instances, local interests are required without cost to the United States to:

1. Provide all lands, easements, and rights-of-way necessary for the project and for construction and maintenance thereof.
2. Hold and save the United States free from damages due to the project.

3. Make any necessary highway, highway bridge, and utility alterations.
4. Operate and maintain local flood protection projects after completion of construction.
5. Provide and maintain piers, berths, shore-transfer, and related facilities for navigation projects.
6. Contribute in certain cases toward initial project costs in proportion to the expected local benefits.

(Note: Local cooperation is not normally required for large reservoir projects where benefits are widely distributed except that reimbursement is required for such functions as power, irrigation, municipal water supply, and recreation.)

Corps policies with regard to other project functions are as follows:

Irrigation When appropriate and feasible, storage space is provided in Corps reservoirs for needed irrigation water supplies as determined by the Bureau of Reclamation. Water is delivered to the Bureau for distribution and collection of charges and all applicable Reclamation laws apply.

Hydroelectric Power Power development may be included in reservoir projects if economically justified. Where power is not found immediately feasible, the law provides that penstocks in dams may be included for future power development upon the recommendation of the Federal Power Commission. Costs allocated to power are the basis for establishing rates by the Federal marketing agencies. Power is marketed through agencies of the Interior Department.

Recreation Outdoor recreation, including enhancement of nonmigratory fish and wildlife for fishing and hunting, may be included as a project purpose, and separable costs thereof are 50 percent reimbursable under the provisions of the Federal Water Project Recreation Act of 1965. The Corps encourages local interests to construct and/or maintain recreation facilities at all Corps projects, but may construct and maintain certain facilities as needed where local cooperation is not available. However, the facilities that can be provided without local cooperation are severely limited by the 1965 act. Recreation facilities at Corps projects on lands administered by other Federal agencies are, by agreement, handled by the agency concerned. To facilitate the development of water resource projects under the control of the Department of the Army, the Chief of Engineers is authorized to construct and maintain public parks and other recreational facilities

at project sites. Or, the Corps can permit development of such facilities by local interests. In the latter case, the Corps will lease the necessary land to the organization involved ". . . without monetary consideration . . ." when such organization is a Federal, State, or local governmental agency. 16 U.S.C. Sec. 460(d). The means of development of recreation at project sites is left to the discretion of the Secretary of the Army. Whether or not a project site is actually developed by the Corps or its lessee, the public still receives recreational benefits. The water and surrounding areas of Corps projects are open to public use generally for boating, swimming, bathing, fishing, and other uses if the Secretary determines that such uses are not contrary to the public interest. Nonviolation of state fish and game laws is an enumerated factor to be considered in determining the appropriate uses. 16 U.S.C. Sec. 460(d). Lands not required for project purposes or for public recreational use can be sold or leased to private parties for cottage site development. Lessees are given priority to purchase. The Corps also has authority to transfer land to the state government involved for roadways to serve the cottage.

Fish and Wildlife Conservation Features for mitigation of damages to, or enhancement of, fish and wildlife resources are included in Corps projects in accordance with the Fish and Wildlife Coordination Act. Costs allocated to enhancement of migratory fish are generally nonreimbursable; costs for mitigation measures are distributed among project purposes. Close liaison is maintained with Federal and State fish and wildlife agencies. General authority to consider the effect of river and harbor improvements on fish life is given by 33 U.S.C. Sec. 608. The Corps will include practical and sufficient fishways when such improvements operate as obstructions to the passage of fish.

Water Quality Control Storage for streamflow regulation to improve water quality may be included in multiple-purpose reservoirs pursuant to the Water Pollution Control Act of 1956 (P.L. 660, 84th Congress), as amended. The law provides, however, that such storage may not be provided as a substitute for adequate local treatment or other methods of controlling waste at the source. Such storage may be reserved entirely for streamflow regulation or may be provided by joint use of storage serving other purposes. Costs allocated to water quality control may be assumed by the Federal Government if the benefits are widespread.

Water Supply Municipal and industrial water supply is considered the primary responsibility of the states and local interests. However, storage may be recommended in multiple-purpose reservoirs pursuant to the Water Supply Act of 1958 (P.L. 500, 85th Congress, Title III), as amended. Such storage may be reserved entirely for water supply, or may be provided by joint use of seasonal flood control or other storage. Costs allocated to water

supply may not exceed 30 percent of the total project construction costs and are reimbursable by the water users through a local public agency over a 40- to 50-year period at Federal interest rates. A 10-year interest-free development period is permitted under the law. Interim use for irrigation in the western states may be considered under the terms of Reclamation Law.

Control of Aquatic Plant Growths Pursuant to 33 U.S.C. 610, the Chief of Engineers administers programs for control of aquatic plant growths in the combined interest of navigation, flood control, drainage, fish and wildlife conservation, public health, and related purposes in cooperation with other Federal and State agencies.

Organization The Civil Works activities of the Corps of Engineers in the United States are directed by the Chief of Engineers through his office in Washington, D. C. Also performing civil works under his direction are 11 Divisions and 39 District Offices, the Waterways Experiment Station, the Coastal Engineering Research Center, and the Army Mapping Center. The United States is divided generally along hydrologic boundaries into divisions which are further divided into districts. In the Pacific Northwest, the North Pacific Division comprises the Portland, Seattle, and Walla Walla Districts, plus the Alaska District area which is outside of the Columbia-North Pacific Region.

Much of the planning and all of the construction is carried out at the District level, with the broader regional coordinating and administrative functions being accomplished by Division personnel. The Division personnel also design the powerplants for northwest hydroelectric projects constructed by the Corps.

Department of Commerce

Business and Defense Services Administration

Origin and Background The Business and Defense Services Administration (BDSA) was established by the Secretary of Commerce on October 1, 1953, by Department Order 152 pursuant to authority of Reorganization Plan 5 of 1950.

Purpose and General Responsibility The primary purposes of BDSA are to promote the growth of the U. S. industry and commerce and to prepare and execute plans for industrial mobilization readiness. BDSA acts to create and maintain an atmosphere of constructive

cooperation between business and government and to encourage business participation in the achievement of national goals.

Policy BDSA maintains an active and continuing interest in industrial water planning because of the vital needs for water to sustain the Nation's industries and their growth. BDSA provides assessments, projections and planning commentary of industrial water use, and requirements for other Federal and State agencies having water supply programs. It does not have direct responsibilities or programs for the design, construction, or operation of industrial water supply facilities.

Organization and Programs BDSA maintains close liaison with business and industry in order to provide both Government and business with timely information, services, and assistance in four major areas, two of which are related to the Columbia-North Pacific Framework Study, i.e., Industry Analyses and Domestic Business Policy. BDSA conducts continuing studies and analyses of the American industrial economy and selected segments thereof, in order to provide analytical and interpretative data on industrial trends affecting economic growth and water resources. BDSA advises Government officials on the probable effect proposed policy will have on the business community, counsels against the adoption or continuation of regulations which place burdensome and/or outdated restrictions on industrial innovation and inventiveness, and advances public policy which will produce a positive climate for industrial and commercial growth.

The major responsibility for these BDSA projects, as they pertain to water, resides in the Water Resources and Engineering Services Division. Supporting services are provided by industry experts in the other 22 industry-specialized divisions of BDSA and the 41 Department of Commerce Field Offices.

Economic Development Administration

Origin and Background The Economic Development Administration was established under the authority of the Public Works and Economic Development Act of 1965 (P.L. 89-136), which empowered the Secretary of Commerce to make grants and loans to state, political subdivisions thereof, Indian tribes, and private or nonprofit organizations for public works and development facilities located in designated redevelopment areas and development centers.

The Western Area Office, which is located at Seattle, Washington, has responsibility over the eight western states of Alaska, California, Hawaii, Idaho, Montana, Nevada, Oregon, and

Washington and also the two territories of American Samoa and Guam.

Purpose and General Responsibility The purpose of the agency is to provide new industry and permanent jobs in areas where they are most needed. In order to be eligible, an area must be either (1) a redevelopment area, that is, an area which has suffered from substantial and persistent unemployment for an extended period of time or has a median family income less than 40 percent of the national median; (2) an area which the Secretary of Labor finds to have experienced a sudden rise of unemployment during the preceding calendar year; or (3) an economic development center, that is, a community of not more than 250,000 population which has resources that can be used most swiftly and effectively to create more jobs and higher income for the people in the surrounding area.

In order to be designated eligible, areas are required to submit an Overall Economic Development Program (OEDP) to the Secretary of Commerce. This program must be approved by the Administrator of EDA and also must be updated yearly. Therefore, initiative must be maintained by the local area itself.

Policy The policy of the Economic Development Administration has been to approve mainly those projects which will directly create or benefit new long-term employment. Not only how many jobs will be created, but also who will get those jobs is an extremely important factor in considering the merits of projects. The agency especially emphasizes the creation of jobs for the hard-core unemployed and for those who are in the low income family brackets.

Organization and Programs Regarding such areas as river basin, the Economic Development Administration has the authority to designate appropriate "Economic Development District" within a state if the proposed district is of sufficient population and resources to foster economic development on a scale involving more than a single redevelopment area, and if the area has a district overall economic development program.

Through its State Field Coordinators, the Economic Development Administration works directly with communities and local agencies in helping them apply for EDA assistance.

The Western Area Office participates in interagency activities and represents the U. S. Department of Commerce in economic development matters, including the coordination of economic development with water resource development and planning.

The following four programs comprise the primary functions of the Economic Development Administration:

Public Works More than two-thirds of the funds authorized by Congress for the new program will be used for public works and development facility grants. Loans of up to 100 percent are also authorized for these projects in areas where funds are not otherwise available. Public Works provide such facilities as water and sewage systems, access roads and the like, to encourage industrial development that will result in long-term employment. These development facilities will be constructed by providing direct grants of up to 50 percent of the cost of eligible projects and supplementary grants which can bring the Federal share as high as 80 percent in the neediest areas.

Business Loans The Economic Development Act provides low-interest, long-term loans to businesses expanding or establishing plants in designated redevelopment areas. Loans of up to 65 percent of the total project cost (including land, buildings, machinery, and equipment) may be made for up to 25 years.

Technical Assistance This assistance may be in the form of studies to identify area needs or to find solutions to industrial and economic development problems, grants-in-aid for planning and administering local economic development programs, and management and operational assistance to private firms.

Research and Information Funds are provided under the act to develop a continuing program of study, training, and research into the causes of unemployment, underemployment, and chronic depression, and to devise programs and projects to help raise income levels.

Environmental Science Services Administration

Origin and Background ESSA - The Environmental Science Services Administration was created in July 1965 within the U. S. Department of Commerce. Its formation brought together the functions of the Weather Bureau and Coast and Geodetic Survey, which became major elements of the new agency and created the Environmental Data Service, National Environmental Satellite Center, and the ESSA Research Laboratories.

Purpose and General Responsibility The Environmental Science Services Administration is the national agency for observing, describing, understanding, and predicting the natural environment from the earth and oceans to the upper atmosphere and space. ESSA

gathers, processes, and issues information on weather conditions, river water heights, coastal tides and currents, movement of ocean currents, the structure and shape of ocean basins, seismic activity, the precise size and shape of the earth, and conditions in the upper atmosphere and space. ESSA maintains warning systems against hurricanes, tornadoes, floods, and seismic sea-waves, and other environmental hazards, and is working to develop techniques of earthquake prediction. ESSA employees, in the United States and elsewhere around the world, man geophysical observatories, communication systems, and environmental research laboratories.

Policy Agency policy recognizes that the oceans, the lower and upper atmosphere, and the earth itself all interact and affect each other, thus forming a single unified environment which must be studied as a scientific whole. ESSA seeks to describe and understand this unified physical environment.

Organization and Programs ESSA includes five major services and research organizations: the Weather Bureau, the Coast and Geodetic Survey, the Environmental Data Service, the National Environmental Satellite Center, and the Research Laboratories.

The Weather Bureau reports the weather of the United States and its possessions, provides weather forecasts to the general public, issues warnings against tornadoes, hurricanes, floods, and other weather hazards and records the climate of the United States. In addition to this basic weather service, the Weather Bureau develops and furnishes specialized weather services which support the needs of agriculture, aeronautical, recreation, maritime, space, and military operations. The services of the Weather Bureau are supported by a national network of surface and upper-air observing stations, aircraft, satellite systems, communications, and computers. In the Columbia-North Pacific area, forecasts are provided to the general public, aviation, marine, and hydrologic interests. In the field of hydrology, daily stage and discharge forecasts are issued during flood periods, including flood crests. Forecasts of other levels of flow for seasonal or shorter periods are also issued as required.

The Coast and Geodetic Survey prepares nautical and aeronautical charts to insure the safety of marine and air navigation. It measures the earth's gravity, magnetic fields, size and shape, and maintains a network of horizontal and vertical control points to aid in mapping, engineering, and scientific projects. The Survey records and measures earthquakes and operates the Nation's seismic sea-wave warning service.

Its oceanographic operations include hydrographic surveys, marine gravity and magnetic surveys, surveys of physical and chemical

properties of the oceans, and tidal surveys. Results of surveys and other information for the Columbia-North Pacific area are made available through the Seattle office of the Coast and Geodetic Survey.

The Environmental Data Service collects, processes, archives, publishes, and issues environmental data gathered on a global scale. The Service maintains data centers for geodetic, geomagnetic, seismological, climatological, hydrological, and other geophysical information, providing a single source of readily available environmental data to specialized and general user groups. To provide effective data support, the Service is active in development of advanced data storage and retrieval methods and computer applications. Meteorological, climatological, hydrological, oceanographic, hydrographic, and other environmental data for the Columbia-North Pacific area are available through the EDS State Climatologists, Weather Bureau, the Coast and Geodetic Survey, and from the National Environmental Data Centers.

The National Environmental Satellite Center plans and operates environmental satellite systems, gathers and analyzes satellite data, and develops new methods of using satellites to obtain environmental data. At present, the center operates the Operational Satellite Weather System which employs ESSA (Environmental Survey Satellite) vehicles to monitor global cloud cover. As the ESSA series matures, sensors will be added to measure additional atmospheric characteristics and to provide data on solar, ionospheric, oceanographic, and other geophysical phenomena.

ESSA Research Laboratories conduct an integrated research program relating to the oceans and inland waters, the lower and upper atmosphere, the space environment, and the inner earth to increase understanding of man's geophysical environment.

Two components of ESSA Research Laboratories are located in Seattle. These are the Pacific Oceanographic Research Laboratory at Lake Union and the Joint Oceanographic Research Group on the campus of the University of Washington. Research programs in physical oceanography and marine geophysics are conducted at these facilities.

Federal Power Commission

Origin and Background

The Federal Power Commission was created in 1920 when Congress approved the Federal Water Power Act, and was composed of the Secretaries of War, Interior, and Agriculture.

In the years preceding passage of this act, conflicts between interests of opposing water users led to independent bills before independent committees for independent legislative purposes, although the basic aim in general was to permit the development of water power. In 1908, President Roosevelt stopped the enactment of special acts for private developments, which he said were "giving away the property of the people in the flowing waters . . . in advance of the formulation of definite plans as to their use." After this message, the necessity for river use planning continued to be recognized in the General Dam Act of 1910 and in the House and Senate Committee reports on water power legislation.

Up to 1920, the administration of water powers had been handled independently by three separate departments--War, Interior, and Agriculture--and it was finally agreed that through coordination of their work under a Federal Power Commission composed of heads of those departments, a common policy could be pursued and the combined efforts of the three agencies directed toward a constructive national program of intelligent economical utilization of our water resources.

In 1930, after 10 years of operation under the Federal Water Power Act, the Commission was reorganized by Act of Congress as an independent agency composed of five Commissioners; and in 1935 passed the Public Utility Act which made the Federal Water Power Act Part I of the new Federal Power Act and added Parts II and III, dealing with interstate transmission of electrical energy, the companies so engaged, and water power project licenses. Many important amendments and congressional acts have since been made, which have expanded the work and responsibilities of the Commission.

Purpose and General Responsibility The FPC is a quasi-judicial agency which was originally set up to safeguard the Nation's water resource and at the same time encourage and issue licenses for non-Federal development of hydroelectric power in the public domain and navigable streams. Under the provisions of the Federal Power Act and amendments thereto, the Commission's responsibility was greatly increased.

Basic authority for the Commission's water-resource studies is contained in Sections 4(a), 4(c), 10(a), and 7(b) of the Federal Power Act. These sections are as follows:

"Section 4. The Commission is hereby authorized and empowered--(a) to make investigations and to collect and record data concerning the utilization of the water resources of any region to be developed, the water power industry and its relation to other industries and to interstate or foreign commerce,

and concerning the location, capacity, development costs, and relation to markets of power sites, and whether the power from Government dams can be advantageously used by the United States for its public purposes, and what is a fair value of such power, to the extent the Commission may deem necessary or useful for the purposes of this Act."

"Section 4(c). To cooperate with the executive departments and other agencies of State or National Governments in such investigations; and for such purpose the several departments and agencies of the National Government are authorized and directed upon the request of the Commission to furnish such records, papers, and information in their possession as may be requested by the Commission, and temporarily to detail to the Commission such officers or experts as may be necessary in such investigations."

Section 10(a) of the Federal Power Act provides that all licenses issued for non-Federal hydroelectric projects be on the following conditions:

"Section 10(a). That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, and for other beneficial public uses, including recreational purposes"

Section 7(b) of the act provides that:

"Section 7(b). Whenever, in the judgment of the Commission, the development of any water resources for public purposes should be undertaken by the United States itself, the Commission shall not approve any application for any project affecting such development, but shall cause to be made such examinations, surveys, reports, plans, and estimates of the cost of the proposed development as it may find necessary, and shall submit its findings to Congress with such recommendations as it may find appropriate concerning such development."

Additional authority for planning-type studies by the Commission is contained in the various Flood Control and River and Harbor Acts which provide substantially as follows:

"... and provided further, that penstocks or other similar facilities adapted to possible further use in the development of hydroelectric power shall be installed in any dam authorized in the act for construction by the Department of the Army when approved by the Secretary of the Army on the recommendation of the Chief of Engineers and the Federal Power Commission."

The Water Resources Planning Act of 1965, which established the Water Resources Council to coordinate and carry out water resource planning activities, gives the Commission additional responsibility. The Chairman of the Federal Power Commission is a full member of the Council, and the Regional Engineer of the Commission's San Francisco Regional Office is a member of the Pacific Northwest River Basins Commission, which is organized under provisions of the Water Resources Planning Act.

Some of the major court cases which have affected the jurisdiction and operation of the Commission in the water resources field are: New River Case (85 L. Ed. 201); First Iowa Case (339 U.S. 979); Pelton Case (349 U.S. 435); Cowlitz Case (207 F 2d 391 [1955]); Hells Canyon Case (237 F 2d 777 [CADC, 1956]); and the Taum Sauk Case (381 U.S. 90).

The New River Case is discussed in the Commission's 20th Annual Report (1940). In this case the Supreme Court recognized and approved the basic principles underlying Federal power policy with respect to the Nation's rivers. The authority of the Commission to issue licenses on navigable waters was confirmed. Also navigable waters were stated to include waters which could be made usable in interstate commerce by reasonable improvement. There are other important elements to this case which are not mentioned here.

In the First Iowa Case, decided in 1950, the Supreme Court held that the Commission was not required to compel the applicant to produce evidence that it has complied with all the applicable state laws before a license may be granted. In a prior decision involving the same applicant and the same project, the court held that the Federal Power Act (Section 9[b]) does not require compliance with state laws and that the Commission may issue a license without consent of the state affected.

In the Pelton Case the court in effect affirmed the Commission's order granting a license for the Pelton Project on the Deschutes River in Oregon. Since the project would be built upon and would affect land reservations of the United States, the court said that its authorization is within the exclusive jurisdiction of the Federal Power Commission, notwithstanding the law of the State of Oregon to the contrary.

In the Cowlitz Case the Court of Appeals for the Ninth Circuit sustained the Commission's order issuing a license to the city of Tacoma authorizing construction of two dams on the Cowlitz River in Washington. Since the stream is navigable and, therefore, under the dominion of the United States, the laws of the State of Washington regulating the construction of dams cannot prevent the Commission from issuing a license or bar the city from building the dams. Certiorari was denied (347 U.S. 936).

In the Hells Canyon Case the Supreme Court declined to review the lower court's decision which affirmed the Commission's action granting a license for three developments on the Snake River. The court held that the Commission need not recommend a development for Federal construction simply because the Government has better credit and is free from taxation. Also, having exercised its judgment that the development be constructed by private interests, it need only find that the proposal be adapted to a comprehensive plan for the development of the water resources, and it need not use the plan for Federal development as a standard for judgment.

In the Taum Sauk Case the Commission took jurisdiction over a pumped storage project not affecting lands of the United States and with little or no effect on navigation on grounds that generation from the project affected interstate commerce. The Commission's finding and issuance of license was overruled by the U.S. Court of Appeals. However, on appeal to the Supreme Court the Commission's position was upheld. Cases involving the Commission's jurisdiction over hydroelectric projects are expected to be simplified by this decision.

Policy The policy of the Federal Power Commission regarding the Nation's water resources is in accord with that in the "Statement of Policy" of the "Water Resources Planning Act" (approved by the Congress in July 1965), which is "to encourage the conservation, development, and utilization of water and related land resources of the United States on a comprehensive and coordinated basis . . . with the cooperation of all affected Federal agencies, states, local governments, individuals, corporations, business enterprises, and others concerned."

The Commission's policy with respect to water resource development is governed by its responsibilities and authority granted to it in this field under the sections of the Federal Power Act, and the Flood Control Acts as quoted above, and under the Inter-Agency Agreement on Water and Related Land Resources approved by the President on May 26, 1954.

Organization and Programs The Federal Power Commission has need for up-to-date and reasonably complete plans for the development of the Nation's river basins in order to carry out several provisions of the Federal Power Act. Among such needs are those in connection with the consideration of lands of the United States that are withdrawn for power purposes; the cooperative studies with other Federal agencies of prospective multiple-purpose reservoirs; the licensing of non-Federal hydroelectric projects; and the relicensing, abandonment, or recapture of projects when licenses expire. Each of these activities requires an expressed or implied determination that, in the judgment of the Commission, the proposed action is best adapted to a comprehensive plan for developing the river basin for all beneficial uses, including recreation. Adequate plans for development are available for only a small percentage of the Nation's rivers. Other Federal, State, or local agencies are developing plans for many basins, but for many others planning work is neither underway nor scheduled. Because of this unfulfilled need for basin plans and its responsibility under the Federal Power Act, the Commission is presently engaged in a limited, but essential Water Resources Appraisal Program of the Nation's river basins.

Department of Health, Education, and Welfare

Public Health Service

Origin and Background The Department of Health, Education, and Welfare, one of the four principal water resource development planning departments, has delegated certain responsibilities to the Public Health Service.

The 5th Congress created the Marine Hospital Service in 1798 to provide health care for merchant seamen. Through the years, responsibilities for protection of the Nation's health were added until in 1912 Congress enacted legislation consolidating these powers under the renamed Public Health Service. This act gave the Service its first powers to engage in studies of the "disease of man and conditions affecting the propagation and spread thereof, including sanitation and sewage and the pollution either directly or indirectly of . . . navigable streams and lakes."

New demands were placed upon the Service by sanitation problems encountered during World War I and the disastrous influenza epidemic of 1918. Growing population, expanding industry, and increasing travel all heightened environmental health problems in the twenties, thirties, and early forties with new legislation being enacted to handle each area of concern. In 1944, all previous legislation was consolidated under the Public Health Service Act

(Public Law 410, 78th Congress). This act charged the PHS with responsibility to study causes, control, prevention, and treatment of man's diseases, including water purification, sewage treatment, and water pollution.

Purpose and General Responsibility Various responsibilities of the Public Health Service applicable to water resources development planning activities are as follows:

1. Research and Investigation for Public Health Aspects, Water Resource Developments and Improvements: Section 301 states in part:

"The Surgeon General shall conduct in the Service, and encourage, cooperate with, and render assistance to other appropriate public authorities, scientific institutions, and scientists in the conduct of, and promote the coordination of, research, investigations, experiments, demonstrations, and studies relating to the causes, diagnosis, treatment, control, and prevention of physical and mental diseases and impairment of man, including water purification, sewage treatment, and pollution of lakes and streams."

2. Community Water Supplies: Section 361(a) of the Public Health Service Act directs the Surgeon General to make and enforce regulations for the health protection of interstate travelers and for the prevention of disease transmission from state to state; Section 311 authorizes the Public Health Service to work with state and local authorities in enforcing quarantine regulations.

Pursuant to these sections, Interstate Quarantine Regulations were developed and adopted; included in these regulations were a Part 72 (PHS Regulations), Subpart D--"Potable Water: Source and Use," and Subpart J--"Drinking Water Standards." For water supplies used by interstate carriers the following aspects were included:

- a. Finished water quality for drinking and culinary purposes.
- b. Adequacy of supply so as to meet maximum demands.
- c. The condition of purity or contamination of the raw water supply.
- d. Provision of and satisfactory operation of water treatment works, as needed.

3. General Medical and Health Research and Investigation Including Diseases and Hazards Potentially Arising from Water: A broad spectrum of research and investigation is conducted under various other parts of the PHS Acts; authority for research covers specific hazards from environmental-water factors which fall into three categories.

- a. Chemical--both organic and inorganic contaminants can result in acute toxic or long-term effects on humans.
- b. Biological--microbiological contaminants and insect vectors associated with spread of communicable disease.
- c. Radiological--radioactive contaminants which in very low level concentrations may produce radiation damage in humans.

4. Although water pollution control activities were transferred from HEW to Interior in May 1966, as detailed in the section describing FWPCA responsibilities, certain pollution control activities, particularly in the field of public health, are retained by HEW. These retained activities are summarized as follows:

- a. Section 2(k) of the Water Quality Act of 1965 provides as follows:

"The Surgeon General shall be consulted by the head of the Administration on the public health aspects relating to water pollution over which the head of such Administration has administrative responsibility."

- b. Reorganization Plan No. 2 of 1966 states (Section 1[f]):

"The functions of the Surgeon General under Section 2(k) of the Water Quality Act of 1965 (79 Stat. 905) are transferred to the Secretary of Health, Education, and Welfare within 90 days after this reorganization plan becomes effective, the Secretary of the Interior and the Secretary of Health, Education, and Welfare shall present to the President for his approval an interdepartmental agreement providing in detail for the implementation of the consultations provided for by said Section 2(d). Such interdepartmental agreement may be modified from time to time by the two Secretaries with the approval of the President."

Section 1(e) of Reorganization Plan No. 2 of 1966 also provides for the Department of Health, Education, and Welfare to advise on public health questions involved in determinations by Federal agencies of need for and value of inclusion of storage for water quality control in Federal reservoirs.

In addition to other pertinent matters, the HEW-Interior Interdepartmental Agreement outlines public health aspects of water pollution, technical areas upon which HEW will provide advice to Interior, and describes the kinds of studies on the health aspects of water pollution which the Public Health Service will conduct.

5. Other Responsibilities of the Public Health Service Directly Related to Water Resources Planning are summarized as follows:

- a. Executive Order 1101, "Assisting Emergency Preparedness Functions to the Secretary of Health, Education, and Welfare," February 20, 1962.
- b. Public Law 90-148, Air Quality Act of 1967; and Executive Order 11282, "Control of Air Pollution Originating from Federal Installations," May 26, 1966.
- c. Public Law 89-749, Comprehensive Health Planning and Public Health Services Amendments of 1966. Support for state water supply planning and program activities are considered to be covered under this act as part of comprehensive health planning and services.

Policy The general mission of the Public Health Service is oriented toward protecting and advancing the national health, alleviating human suffering, guarding against the dangers of disease, and improving and prolonging human life. An essential facet in accomplishing this mission requires investigation and control of the so-called "environmental insults" resulting from man's varied activities. Many of these "insults" are being perpetrated against our water and related land resources. Identification and development of recommended actions to accomplish alleviation of these anomalies to enhance man's health and welfare form the central policy of the Public Health Service's activities in water resources development planning.

Organization and Programs Public Health Service programs currently underway of particular significance to the Columbia-North

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Pacific Study are the Northwest Watershed Sanitation Project and Shellfish Sanitation Program, the Insect Vector Control Program, and the Indian Health Program.

For example, the Northwest Watershed Program begun in 1965 is evaluating the impact of recreation and other activities in the upper watersheds on stream water quality in general but with particular emphasis on disease-producing organisms. The three watersheds under study (Clackamas, Cedar, and Green Rivers) have varying degrees of activities and, therefore, are subject to different levels of pollution. With completion of data collection in September of 1967, evaluation of these data can be of significant benefit in determining the impact on man's activities on the quality of water available in the watersheds and used for drinking and other municipal purposes.

Research at the Northwestern Water Hygiene Laboratory, Purdy, Washington, includes investigation on methodology for isolation and enumeration of viruses and pathogenic bacteria as may be found in the estuarine area and fresh-water streams. Studies are also made in the environment. Cooperative studies with the Food and Drug Administration include depuration of viruses and bacteria from West Coast species of shellfish. Completion of the new Water Hygiene Laboratory will permit studies of chemical, radiological, and biological contaminants that may be present in fresh or salt water areas as they relate to public health through utilization for domestic water supplies, recreation, and the use of the marine environment as a food source.

Department of Housing and Urban Development

Origin and Background

The Department of Housing and Urban Development came into existence on November 9, 1965, with responsibility for all programs administered by the Housing and Home Finance Agency and its constituents. In establishing the Department, Congress declared that, "The general welfare and security of the Nation and the health and living standards of our people require, as a matter of national purpose, sound development of the Nation's communities and metropolitan areas in which the vast majority of its people live and work."

Within the aegis of the Department are programs relating to urban renewal, low and moderate income housing, FHA mortgage credit, urban planning, open space land, and community facilities. Both technical and financial assistance is provided through a variety of loans, grants, and mortgage insurances.

Organization and Programs

Program administration is vested in several locations serving the Pacific Northwest, including: the Regional Office, San Francisco, California; the Northwest Area Office, Seattle, Washington; and several FHA Mortgage Insuring Offices located in the principal population centers. Of the more than 40 HUD programs, the following pertain directly or indirectly to the management and development of water and related land resources.

The Urban Planning Assistance Program, established under Section 701 of the Housing Act of 1954, as amended, provides grant assistance to most general purpose and regional municipal organizations in order to foster good community, metropolitan, and statewide planning.

The Advances for Public Works Planning program provides interest-free advances to assist planning for individual local public works and for area-wide and long-range projects, which will help communities deal with their total needs. All types of public works are eligible, including water and sewer systems, recreational projects, irrigation projects, and bridges.

The program of Grants for Advance Acquisition of Land provides financial assistance to encourage communities to acquire land for future construction of public works and facilities. The facility must contribute to the comprehensively planned development of the area.

Under the Water and Sewer Facilities Grants program, assistance is provided to local public bodies and agencies to finance the cost of improving or constructing basic sewer and water facilities. Where there is no existing system, the project must be designed so that it can be linked with other independent water and sewer facilities in the future. Grants generally pay 50 percent of the cost including the cost of the land.

The Public Facility Loans program provides long-term loans for the construction of needed public facilities, including water storage, transmission, and distribution lines. The terms of the loan may extend up to 40 years, governed by the applicant's ability to pay and the estimated useful life of the facility.

Funds for the acquisition and development of land for open space uses are available from HUD under the Open Space Land and Urban Beautification Grant programs. Beautification of water-related lands, purchase and upgrading of watershed areas for public use, and conservation activities are among eligible uses of funds.

The Federal Housing Administration provides mortgage credit insurance for a variety of land development and housing purposes. It is the objective of the Mortgage Insurance for Land Development program to assist private enterprise in developing land for industrial and related uses in a manner that is orderly, economical, and consistent with sound community growth and urban development.

FHA also administers the program of Mortgage Insurance for New Communities. The program attempts to facilitate adequate financing at reasonable cost for site acquisition and preparation involved in the development of new communities. Insurance of mortgages is provided to finance the development of sites, including necessary roads and water and sewage facilities, for new communities.

Each of the programs mentioned above attempts to fill a particular need in the planned development of the Nation's communities and metropolitan areas. There is a logical sequence beginning with planning for the future on a broad scale extending through project planning and continuing with programs to assist in project construction. Related programs deal with upgrading open space lands and the building of new communities. Behind each of these specifically directed sources of funds lies the concept of systematically solving the problems of urban development.

Department of the Interior

The Department of the Interior was created in 1849 to fill the role of general housekeeper for the Federal Government. During the more than one hundred years of its existence, numerous activities were added to or removed from the original functions. Through the creation of subsequent executive departments and certain independent agencies, its function has evolved into that of custodian of much of the Nation's natural resources.

In formulating and administering programs for the management, conservation, and development of natural resources, the Department pursues the following objectives: the encouragement of efficient use, the assurance of adequate resource development to meet the requirements of national security and an expanding national economy, the maintenance of production capacity for future generations, the promotion of an equitable distribution of benefits from nationally owned resources, the discouragement of wasteful exploitation, the maximum use of recreational areas, and the orderly incorporation of Indian groups and individuals into our national life.

The Department's responsibilities in the water and related land resource field are carried out under the authority of numerous Acts and Executive Orders by its various offices and bureaus.

Bonneville Power Administration

Origin and Background Congress created the Bonneville Power Administration by the Bonneville Project Act of August 20, 1937, to market the power from Bonneville Dam. BPA has since been designated to market power from the other Federal hydroelectric projects in the Pacific Northwest. To accomplish its mission, BPA designed and built the Nation's largest network of long-distance, high-voltage transmission lines. This system, which is still adding capacity rapidly, is the Northwest's main grid.

BPA does not build dams or powerplants. The Federal projects in the region, most of which are multipurpose, have been built and operated by the Army Corps of Engineers or the Bureau of Reclamation. The multipurpose dams were designed to provide flood control, navigation, irrigation, municipal and industrial water supply, pollution control, recreation, or other benefits besides generating power. Power features of the dams and BPA's transmission system operate as a unit called the Federal Columbia River Power System.

Purpose and General Responsibility Bonneville Power Administration serves the States of Washington, Oregon, Idaho, and Montana west of the Continental Divide, plus small adjacent portions of California, Nevada, Utah, and Wyoming. Essentially, this service area is the Columbia River Basin within the United States. It covers 290,000 square miles. A large part of the power is generated east of the Cascade Mountains which divide Oregon and Washington north to south. The principal load centers lie west of the mountains. To deliver the power to these load centers BPA has built a number of large lines across the Cascades.

The BPA grid, with well over 10,000 miles of extra high voltage line, has been interconnected with 14 other transmission systems within the region and with other main grids in neighboring regions. Besides scheduling and dispatching power from Federal projects in the Northwest, BPA wheels or exchanges over its grid millions of kilowatts for other utilities. Part of the BPA grid embraces the Nation's largest set of 500,000-volt transmission lines. These lines are being built to overlay a 230,000-volt grid and give BPA capacity to assure an adequate, reliable flow of power. BPA is expected to have more than 3,000 miles of these 500-kv lines in operation before 1980.

The cost of the dams allocated to power and the investment in the transmission system--with interest--plus substantial assistance to irrigation projects, is being repaid from power revenues. All funds required to construct, operate, and maintain the power system are appropriated by Congress out of the U. S. Treasury.

Congress required that BPA repay the power investment in each generating project within 50 years following its completion. This period is shorter than the estimated useful life for each project. Many experts believe that with proper maintenance the projects should last indefinitely. Hence, when repayment is complete, the public will own a debt-free power system. The repayment period for transmission facilities is 45 years, which is the average service life for such facilities.

Bonneville rates are among the lowest in the Nation for wholesale delivery. The basic rates are the same for all customers--private utilities, public utilities, and large industries--no matter how far they are located from dams; hence, they are called postage-stamp rates. The only exception applies to customers taking power for use or resale within 15 miles of a Federal dam. These customers may get a lower "at-site" rate, but must pay for the transmission and transformers connecting their facilities with the dam.

Policy The Bonneville Project Act directs Bonneville Power's Administrator to:

1. Sell at wholesale the electric energy from Bonneville Dam to public bodies and cooperatives and to private agencies and persons, but not to individual consumers.
2. Construct, operate, and maintain transmission lines and substations.
3. Interconnect the Bonneville project with other Federal projects and publicly owned systems.
4. Encourage the widest possible use of all the electric energy that can be generated and marketed and prevent monopolization by limited groups.

These provisions of the Bonneville Project Act now apply to the sale of power from other designated Federal dams.

Organization and Programs To do its job, BPA is organized into four divisions:

1. Division of Power Management--responsible for power marketing and customer and power-use services; the Division carries out planning for power marketing and for future generating projects to meet economic needs of the region.

2. Division of Engineering--responsible for system engineering, transmission design, substation design, construction, land acquisition, technical laboratories, and plant services.
3. Division of Administrative Management--responsible for finance and accounts, personnel, supply, and administrative services.
4. Division of Operation and Maintenance--responsible for power operations, maintenance, and the Area Offices. Area Offices are situated in Seattle, Portland, Walla Walla, Spokane, and Idaho Falls. District Offices are at Wenatchee and Kalispell (both under the Spokane Area) and at Eugene (Portland Area).

Fish and Wildlife Service

Origin and Background The history of the Service begins in 1871 when the United States Fish Commission began its work with fishery resources and later became the Bureau of Fisheries under the Department of Commerce. In 1885, the Bureau of Biological Survey began its work with birds and mammals in the Department of Agriculture. In 1939, under the authority of the President's Reorganization Plan II, the Bureau of Fisheries in the United States Department of Commerce and the Bureau of Biological Survey of the United States Department of Agriculture were transferred from their respective departments to the Department of the Interior.

In 1940, the two Bureaus were brought together with the establishment of the Fish and Wildlife Service in the Department of the Interior. Reorganization under the Fish and Wildlife Act of 1956 (70 Stat. 1119) created the present Fish and Wildlife Service. Within that Service are two Bureaus--the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife.

Purpose and General Responsibility The Bureau of Commercial Fisheries' primary responsibility is the well-being of commercial fisheries, whales, seals, and sea lions of the United States. The Bureau's objectives are to maintain the domestic fishing industry in a healthy and competitive state and thus provide needed animal protein foods in variety and abundance for human and industrial use. Since its beginning, primary functions of the Federal fishery agency have been investigational and advisory. The Bureau manages commercial fisheries in cooperation with state agencies; however, laws and regulations are state responsibility.

The Bureau of Sport Fisheries and Wildlife is the Federal agency primarily responsible for ensuring at the Federal level, the conservation and management of the Nation's wild birds, mammals, and sport fishes, both for their recreational and their economic values. Its principal objectives are to conserve these renewable resources for the continued enjoyment of hunters, anglers, and nature enthusiasts, and to manage them so that their abundance is most compatible with the economic, social, and aesthetic interests of all Americans.

Policy The Fish and Wildlife Act of 1956 established a new national policy for the development, protection, and wise use of the country's fish and wildlife resources, as this quotation from the "Declaration of Policy" indicates:

"The Congress hereby declares that the fish, shellfish, and wildlife resources of the Nation make a material contribution to our national economy and food supply, as well as a material contribution to the health, recreation, and well-being of our citizens; that such resources are a living, renewable form of national wealth that is capable of being maintained and greatly increased with proper management, but equally capable of destruction if neglected or unwisely exploited; that such resources afford outdoor recreation throughout the Nation and provide employment, directly or indirectly, to a substantial number of citizens; that the fishing industries strengthen the defense of the United States through the provision of a trained seafaring citizenry and action-ready fleets of seaworthy vessels; that the training and sport afforded by fish and wildlife resources strengthen the national defense by contributing to the general health and physical fitness of millions of citizens; and that properly developed, such fish and wildlife resources are capable of steadily increasing these valuable contributions to the life of the Nation."

The Fish and Wildlife Coordination Act states that ". . . wildlife conservation shall receive equal consideration and be coordinated with other features of water resource development programs" This is a policy statement declaring equal partnership for fish and wildlife resources in water development planning.

Organization and Programs The Bureau of Sport Fisheries and Wildlife is composed of a headquarters office in Washington, D. C., and five regional offices located within the United States.

Regional offices are located at Portland, Oregon; Albuquerque, New Mexico; Minneapolis, Minnesota; Atlanta, Georgia; and Boston, Massachusetts.

There are approximately 500 field installations, including wildlife refuges and management areas, fish hatcheries, and wildlife and sport fisheries research stations. The Director is the chief executive of the Bureau. Field programs, except those concerned with research, are administered by Regional Directors who report to the Director. Research centers, laboratories, and stations report directly to the Washington office.

Some of the major program areas of the Bureau of Sport Fisheries and Wildlife include:

1. Research into the management of marine and fresh-water sport fisheries of the Nation.
2. Technical assistance to Federal, State, and private organizations in the development and administration of sportfish and wildlife management programs.
3. Administration and operation of a national system of fish hatcheries engaged in the propagation and release of fish for both sport and commercial fisheries.
4. Administration of Federal grants-in-aid to states for fish and wildlife restoration and management.
5. Cooperation with other Federal and non-Federal agencies engaged in water resource development projects to determine the effects of such projects on fish and wildlife resources and recommending measures for the protection and improvement of these resources.
6. Development and enforcement of Federal laws and regulations for the protection, conservation, and management of waterfowl and other migratory birds.
7. Research, development, and application of methods and techniques in the control of animals that are harmful or injurious to man, livestock, poultry, desirable wildlife species, and other property. (For the most part, these programs are carried out in cooperation with state conservation departments, municipalities, and other non-Federal organizations and groups.)

8. Research on life histories, habits, distribution, management, and relationships between birds, mammals, and other wildlife and their surroundings.
9. Development and operation of a national system or refuges insuring a balanced wildlife management program for migratory waterfowl, big game, and other forms of wildlife as well as preservation of species of wildlife threatened with extinction.

The Bureau of Commercial Fisheries is composed of a headquarters in Washington, D. C., and seven regional offices located in Seattle, Washington; St. Petersburg Beach, Florida; Gloucester, Massachusetts; Ann Arbor, Michigan; Terminal Island, California; Honolulu, Hawaii; and Juneau, Alaska. The Bureau has 27 research laboratories located throughout the Nation and also owns and operates 13 seagoing research vessels.

Programs carried out by the Bureau of Commercial Fisheries include: biological and technological research, studies on marketing and market promotion programs, collecting and publishing statistical data, aiding in the development of Columbia River fisheries through cooperation with the states and construction of fish hatcheries, ladders and other fish facilities, taking part in international commissions affecting commercial fisheries of the United States, investigating water resource development projects and their effects on commercial and sport fishes where area of responsibility overlaps with the Bureau of Sport Fisheries and Wildlife, and managing the fur seal resource of the Pribilof Islands.

Funds are made available to the states through the Bureau of Commercial Fisheries for certain contract studies and construction of various fish facilities. Close liaison and cooperation are maintained between the Bureau of Commercial Fisheries and the states.

Geological Survey

Origin and Background A bill establishing the office of the Director of the Geological Survey became law on March 3, 1879 (20 Stat. 394; 43 U.S.C. 31), and provided that "this office shall have the direction of the Geological Survey, and the classification of the public lands and examination of the geologic structure, mineral resources, and products of the national domain." This law was later extended to include the states, in addition to the national domain. Two years later the words "and to continue the preparation of a geologic map of the United States" were added to the appropriation act (22 Stat. 329). In 1888 (25 Stat. 505, 526), an appropriation was made for "geologic surveys in various portions

of the United States" and for the first time, a specific appropriation was made for topographic mapping.

Following the early work on lands available for irrigation, the Geological Survey obtained, in 1894 (28 Stat. 398), funds "for gauging the streams and determining the water supply of the United States."

During 85 years of evolution, several activities of the Survey have served as the nuclei for new separate bureaus to perform appropriate specialized functions. This led to the formation of the Forest Service in 1905, Reclamation Service in 1902, the Bureau of Mines in 1910, and the Grazing Service in the 1930's. The Geological Survey has thus been able to center its emphasis on objective, scientific surveys, investigations, and research without direct commitment to any large development or engineering programs.

Purpose and General Responsibility The broad objectives of the Geological Survey are to perform surveys, investigations, and research covering topography, geology, and the mineral and water resources of the United States; classify land as to mineral character and water and power resources; furnish engineering supervision for power permits and Federal Power Commission licenses; enforce departmental regulations applicable to oil, gas, and other mining leases, permits, licenses, development contracts, and gas storage contracts; and publish and disseminate data relative to the foregoing activities.

Policy The Geological Survey is dedicated to promoting the welfare of the people by making resources investigations in those fields most vitally affecting man's activities. These investigations include a variety of information drawn from field measurements and interpreted for a variety of uses; they provide sound and unbiased scientific knowledge. This knowledge is expressed quantitatively, insofar as possible, concerning the location, extent, quantity, quality, availability, and time characteristics of various aspects of the resources and includes information of the landscape and how it influences water resources.

Organization and Programs The Survey's national headquarters and many of its eastern region headquarters are located in the Washington, D. C., metropolitan area. Currently there are about 2,300 employees in 26 different installations in this vicinity. To facilitate its work, the Survey operates two major field centers: Denver, Colorado, employing 1,400 people and Menlo Park, California, employing 900 people. In addition, at least one office or laboratory is maintained in each state and in Puerto Rico.

1. Conservation: Classify Federal land as to water storage, waterpower, and mineral value; supervise mining and oil and gas leases on Federal, Indian, Outer Continental Shelf, and certain Naval Petroleum Reserve lands; promote the safety and welfare of workmen in mineral industries; maintain production accounts and collect royalties; prepare maps and reports for publication; provide the Bureau of Land Management and other Federal agencies geologic and engineering advice and services for the management and disposition of the public domain.
2. Geology: Make geologic surveys and investigations to determine and appraise the mineral and mineral fuels resources and the geologic structure of the United States and its territories, and provide scientific and technical assistance in appropriate fields, both domestic and abroad, to other Federal agencies, and administer an exploration program for the discovery of domestic mineral reserves by private industry with Federal assistance.
3. Topographic Mapping: Prepare and publish the maps of the National Topographic Map Series, covering the United States and its outlying areas; systematically revise existing maps to maintain their usefulness; conduct research in topographic surveying and mapping, including the component phases of control surveys, aerial photography, photogrammetry, and cartography, on both the techniques and the instrumentation of mapping operations; carry out research on domestic geographic names in connection with Board on Geographic Names to resolve problems of accuracy and propriety of name usage.
4. Water Resources: Determine the source, quantity, quality, distribution, movement, and availability of both surface and ground waters. This work includes investigations of floods and droughts, their magnitude, frequency, and relation to climatic and physiographic factors; the evaluation of available waters in river basins and ground-water provinces, including water requirements for industrial, domestic, and agricultural purposes; the determination of the chemical and physical quality of water resources and the relation of water quality and suspended sediment load to various parts of the hydrologic cycle; special hydrologic studies of the interrelations between climate, topography, vegetation, soils, and the water supply; research to

improve the scientific basis of investigations and techniques; scientific and technical assistance in hydrologic fields to other Federal agencies; and the coordination of national network and special water data acquisition activities of Federal agencies. The results of these investigations are published in the series of Geological Survey publications.

Bureau of Indian Affairs

Origin and Background The Bureau of Indian Affairs was created in the War Department in 1824 and transferred to the Department of the Interior at the time of its establishment in 1849. Legislation governing the conduct of Bureau activities includes the Snyder Act of 1921 and the Indian Reorganization Act of 1934.

The primary objectives of the Bureau's program are: maximum Indian economic self-sufficiency; full participation of Indians in American life; and equal citizenship privileges and responsibilities for Indians.

Purpose and General Responsibility Functions of the Bureau of Indian Affairs include:

1. To act as trustee for Indian lands and monies and to assist the owners in making the most effective use of their lands and other resources.
2. To collaborate with the Indian people (both tribally and individually) in the development of programs leading toward full-fledged Indian responsibility for the management of their own property and affairs and gradual transfer of public service responsibilities from the Bureau of Indian Affairs to the agencies which normally provide these services.
3. To assist Indian tribes and groups, in cooperation with local and state agencies, in developing programs to attract industries to reservation areas.
4. Assisting each tribe in development of an organization of Indian tribes for self-government and the management of its own resources. Enabling legislation authorized such organizations. It also includes provisions permitting a tribe to organize as a municipal corporation and to assume self-governing rights similar to those of the average American community.

5. Development of all feasible irrigation projects on Indian land. The basic authority for irrigation projects on Indian reservations is contained in the General Allotment Act of February 8, 1887, Chapter 119, No. 7, 24 Stat. 390, Section 381, herein quoted:

"In cases where the use of water for irrigation is necessary to render the lands within any Indian reservation available for agricultural purposes, the Secretary of the Interior is authorized to prescribe such rules and regulations as he may deem necessary to secure a just and equal distribution thereof among the Indians residing upon any such reservations; and no other appropriation or grant of water by any riparian proprietor shall be authorized or permitted to the damage of any other riparian proprietor."

Policy The policies under which the Bureau operates with respect to Indian land and water resources include the retention of ownership by Indians and resource management for sustained-yield benefits. Resource use and conservation use programs involve agricultural development, forestry, grazing, irrigation, soil conservation, and industrial development on Indian lands.

Organization and Programs Several Indian tribal lands are scattered across the region. Present activities on these lands include forest management and utilization, fishing, and limited agriculture.

Bureau of Land Management

Origin and Background Since 1812, the Bureau of Land Management and its predecessors, including the General Land Office, has been the Nation's primary Federal real estate agency. Its policies and programs have been governed by over 5,000 Federal land laws.

For nearly 100 years, its primary function was to transfer Federal lands, the public domain, to citizens for settlement and development of the Nation. To date, the Bureau has transferred title to individuals, concerns, and non-Federal agencies for about 1.1 billion acres of Federal land.

Federal land policy began to change about 1880. Some of the public domain lands began to be set aside in reserves such as

national parks, national forests, national wildlife refuges, and military and Indian reservations. Several new Federal agencies were created to administer these reserves.

Since the Taylor Grazing Act in 1934 and the O&C Act in 1937, there has been a land and resource management program for the residual public domain. The Bureau of Land Management was created in 1946, when a reorganization act consolidated the Grazing Service and the General Land Office, both in the Department of the Interior (5 U.S.C. 133y-16).

Purpose and General Responsibility BLM now is partially or totally responsible for the administration of mineral resources on about 800 million acres, about one-third of the total land area of the United States. It also has similar responsibilities for the Outer Continental Shelf. The Bureau has exclusive jurisdiction over 457 million acres, including 282 million acres in Alaska, 174 million acres in 11 western states, and 1 million acres in the remaining states. This is about 60 percent of the total Federal holdings.

BLM has become a full-fledged land management agency rather than a grazing service or a caretaker of Federal lands "pending their final disposal." The transition has been underway for over 20 years. The Classification and Multiple Use Act of 1964 provides for the classification of BLM administered land into two major categories: (1) disposal and (2) retention in Federal ownership. This act also directs the Bureau to protect, manage, and develop the retained lands and nonrenewable resources under principles of multiple use and the renewable resources under principles of sustained yield for 10 major purposes. These purposes are: (1) domestic livestock grazing, (2) fish and wildlife development and utilization, (3) industrial development, (4) mineral production, (5) occupancy, (6) outdoor recreation, (7) timber production, (8) watershed protection, (9) wilderness preservation, and (10) preservation of public values that would be lost if the land passed from Federal ownership. The land classified for disposal is to be transferred to local government for public purposes and to citizens for industrial and agricultural development in a manner that will best serve the long-term public interest.

BLM gross revenues from mineral leases and royalties, timber sales, grazing permits, land sales, etc. have substantially exceeded expenditures for all purposes every year for more than 20 years. In Fiscal Year 1966, for example, receipts were 434 million dollars and expenditures were 88.4 million dollars, leaving a balance of 345.6 million dollars.

In the Columbia-North Pacific Region the Bureau has exclusive jurisdiction over 29.5 million acres or 17 percent of the regional land area. Of this total, about 28 million acres have been classified for retention in Federal ownership or are in the process of being classified. The remaining 1.5 million acres probably will be transferred out of Federal ownership. About four-fifths of the 29.5 million acres are nonforest rangelands in the Snake River Plains and in the Oregon Closed Basin. Programs in this area are oriented toward those multiple uses associated with this cover type. Nearly 3 million acres of commercial forest land, mostly in western Oregon, are included in multiple use programs emphasizing timber management and production. Although Bureau programs are not directly oriented to water development projects, the management practices and uses on BLM lands have an important effect on the watersheds and water resources of the region and upon the management of many reservoirs and adjacent land. These effects must be fully considered in the development of Bureau programs and plans.

Major Functions The major BLM functions are grouped into three categories, explained as follows:

1. Lands and Minerals. The Bureau is responsible for realty activities on all of the public domain and large areas of public land under other agency surface management (e.g. national forests). This includes: the issuance of mineral leases; the management, with the Geological Survey, of the leasable mineral resources, including those of the Outer Continental Shelf; the management of the salable mineral materials; the administration of the General Mining Laws, and Coordination of Mineral Use with surface management; the classification of public land for multiple use or for disposition; the transfer of land title through sales, exchanges, grants, and public land entries for non-Federal purposes, such as residential, urban, industrial, or commercial development; the improvement of land tenure and land patterns for lands to be held in Federal ownership; the granting and administering of all types of rights-of-way, easements, and permits for occupancy of public lands; and the maintenance of basic land ownership records for all public domain lands.
2. Resource Protection, Management, and Development. The resource protection, management, and development activities are conducted primarily on the 457 million acres over which BLM has exclusive jurisdiction. These activities are conducted under a multiple use

philosophy which attempts to maximize the total public and private benefit gained from the available financial and land resources involved.

This includes the evaluation of watershed conditions and the installation and maintenance of land and watershed practices and erosion control devices to stabilize soil, control silt, modify water yield and quality, and avoid both on-site and off-site damage. It also includes the evaluation, planning, protection, management, and development of outdoor recreation, wildlife habitat, timber, and livestock forage values.

Resource management and development activities are supported by a construction and maintenance program for roads, trails, and physical improvements such as headquarters buildings, recreation facilities, and watershed control structures; and by a fire prevention and suppression program.

3. Cadastral Surveys. The Bureau installs and maintains the official public lands surveys. These cadastral surveys are necessary to identify and describe the public lands. It is authorized to make cadastral surveys of other Federal and intermingled lands under certain conditions. It plats and approves mineral surveys executed by United States Mineral Surveyors and prepares maps necessary to the administration of mineral leasing on the Outer Continental Shelf.

Organization The Bureau maintains a Service Center at Portland, Oregon, which exercises certain administrative and technical functions for BLM activities in the States of Alaska, Oregon, Washington, California, Nevada, and Idaho. The operating programs of the Bureau are under the jurisdiction of State Directors and District Managers. Within the Columbia-North Pacific area these include the State Director for Oregon (and Washington), Portland--with 11 Districts; State Director, Idaho, Boise--with six Districts; State Director, Montana, Billings--with one District in the Columbia-North Pacific Region; State Director, Wyoming, Cheyenne--with two Districts in the Columbia-North Pacific Region; State Director, Utah, Salt Lake City--with one District in the Columbia-North Pacific Region; State Director, Nevada, Reno--with one District in the Columbia-North Pacific Region.

Bureau of Mines

Origin and Background The Bureau of Mines was established July 1, 1910, to conduct programs designed to conserve and develop mineral resources and to promote safety and healthful working conditions in the mining and mineral industries.

Purpose and General Responsibility Mineral and fuels studies are conducted, and engineering evaluations are made of marginal mineral and fuels deposits. Studies are made of mining methods and production techniques, and long-range resource investigations are conducted where conservation of other resources, such as water power, is involved. Determinations are made regarding anticipated requirements of mineral resources for economic growth.

Policy The Bureau of Mines has no direct responsibility or authority in water resource development or management. Engineering, economic, and statistical studies are made to provide the Federal Government with essential information of policy and program formulation and to supply industry and individuals with information.

Organizations and Programs The objective of the Bureau of Mines Columbia-North Pacific Study was to assess the current status of the mining and mineral industry in the region and to project mineral production value and employment in mining for target years 1980, 2000, and 2020. These data were developed to serve as a component of an overall economic base study of the region, which will provide the economic basis for determining the scale, sequence, and timing of water and related land resource development plans.

National Park Service

Origin and Background The National Park Service, a Bureau of the Department of the Interior, was established under the authority of the act of August 25, 1916. Actual establishment of the Service took place in 1917 when the first appropriation became available. Prior to that time, 16 national parks and 21 national monuments had already been established. The first reservation of its kind was Yellowstone National Park, established by Congress under the act of March 1, 1872.

Purpose and General Responsibility The development and management of the areas of the National Park System in accordance

with the act of August 25 is the prime responsibility of the Service. Subsequent acts, executive orders, and proclamations have added to the National Park System, which today comprises more than 230 areas. While these areas are administered under a variety of specific designations other than national parks and monuments . . . such as national recreation areas, national seashores, national historic sites, battlefield parts, and others . . . the legislative enactments that have shaped the National Park System clearly define three categories of areas. These are natural, historical, and recreational. Each category is managed in accordance with certain specific principles and policies, consistent with specific congressional enactments.

Along with additions to the National Park System the subsequent acts, executive orders, and proclamations expanded the activities of the Service. Cooperative recreation planning assistance to other Federal agencies, states and their political subdivisions, and foreign countries; history and natural science studies, archeological investigation and salvage, and studies incident to the Historic Sites Survey and the Registry of National Landmarks, emanated from these enactments.

Policy The Organic Act of 1916 assigned to the Service for administration all of the national parks and most of the national monuments previously established. At the same time, the act established a broad framework of policy for the administration of these areas by requiring the National Park Service to "promote and regulate the use of the Federal areas known as National Parks, Monuments, and Reservations hereinafter specified, by such means and measures as to conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Organization and Programs In the area of comprehensive river basin planning, the National Park Service has primary responsibility for those surveys or studies involving historic, archeologic, and specialized natural science themes. These programs as they relate to the Columbia-North Pacific Region Framework Study are:

1. National Park System planning and the management, in accordance with their respective purposes, of the natural, historic, and recreational areas of the System as an integral part of the nationwide recreation plan of the United States.

2. Administration of the Registry of National Landmarks under the authority of the Historic Sites Act of 1935. It is the purpose of this program to establish an inventory of nationally significant historical and natural properties under other Federal, State, local, or private ownership and to encourage their continued preservation. The program is voluntary, and Landmark designation does not change ownership or responsibility for the property.
3. Administration of the Historic Properties Preservation program, authorized by Congress in 1966. The basic purposes of this program are threefold: (a) expansion and maintenance of a national register of properties significant in American history, architecture, archeology, and culture and to grant funds to states for the preparation of comprehensive statewide historic surveys and plans; (b) provision of matching grants-in-aid to the states for the preservation of significant historical, architectural, archeological, and cultural properties; and (c) establishment of a program of matching grants-in-aid to the National Trust for Historical Preservation in the United States.
4. Those phases of comprehensive river basin planning dealing with history, archeology, and natural science; technical assistance to the Bureau of Outdoor Recreation; and postauthorization recreation planning for individual Federal water resource development projects.
5. Studies or surveys which involve the above responsibilities; evaluation of potential additions to the National Park System; recreation planning and related assistance requested by other Federal agencies; and special studies as assigned.
6. Continuing planning relationships with state and local park departments and others on specific area planning, management, interpretation, and related matters.

Bureau of Outdoor Recreation

Origin and Background As a result of recommendations contained in the Outdoor Recreation Resources Review Commission Report of January 31, 1962, the Bureau of Outdoor Recreation was established by Secretarial Order on April 2, 1962. This action was confirmed by the Congress by the Act of May 28, 1963 (Stats. 49)-- 88-29.

The responsibilities of the Secretary of the Interior under the Federal Water Project Recreation Act of July 9, 1965, (79 Stat. 213-218) was delegated to the Bureau on December 10, 1965. This act provides for full consideration of outdoor recreation opportunities in investigation and planning of all Federal water resources development projects and also for the views of the Secretary of the Interior on the extent to which the proposed recreation and fish and wildlife development conforms to and is in accordance with the state comprehensive plan developed pursuant to Subsection 5(d) of the Land and Water Conservation Fund Act of 1965 (78 Stat. 897).

Purpose and General Responsibility The Bureau serves as a focal point in the Federal Government for the activities relating to Outdoor Recreation. It consults and works with several other agencies in the Department of Interior and the Departments of Agriculture; Defense; Health, Education, and Welfare; Housing and Urban Development; and many other agencies concerned in outdoor recreation programs. It is responsible for the coordination of Federal programs and for assistance in state and local recreation programs. The Bureau is concerned not only with parks but with all types of outdoor recreation and natural beauty and seeks to coordinate efforts toward total recreation programs for all outdoor recreation activities.

Policy The Bureau is not a land management agency but is responsible for policy planning, technical assistance, and program coordination. The Bureau operates primarily through the states which are considered to be the focal point in coordinated outdoor recreation programs.

Organization and Programs Most of the Bureau's programs have relevance to the Columbia-North Pacific Study. The most significant are its responsibilities for water project recreation planning and comprehensive river basin planning. In this work, the Bureau provides recreation evaluations and recreation planning assistance to the Bureau of Reclamation, the Corps of Engineers, the Bureau of Indian Affairs, the Federal Power Commission, and

other agencies as the need arises. It works with the Fish and Wildlife Service, the Forest Service, the Bureau of Land Management, the National Park Service, and appropriate state agencies in correlating recreation planning in river basin studies and in water development projects.

It also administers the Land and Water Conservation Fund Act (P.L. 88-578 of 1965), which provides financial assistance to the states for outdoor recreation planning, acquisition, and development of outdoor recreation projects. The fund is also used for financing recreation land acquisition by the Forest Service, the National Park Service, and the Bureau of Sport Fisheries and Wildlife.

It conducts studies of proposed national areas such as wild rivers, trails, recreation areas, parks, islands, etc.

The Bureau is responsible for stimulating research in recreation in order to facilitate the development of comprehensive statewide and nationwide plans and project plans.

The Bureau is active in creating interest in an outdoor recreation education program among the institutions of higher learning. The objective is to train personnel, to plan, administer, and execute programs for the development, conservation, and use of the Nation's recreation resources.

In addition, the Bureau is responsible for other miscellaneous recreation projects and activities, among which are the review of state and local applications for acquisition of surplus property and public lands under the Public Land Laws; conducting special recreation surveys; cooperating with private interests in developing public recreation areas; reviews proposed highway projects to determine their effect on recreation and environmental quality; reviewing and cooperating with Federal agencies in recreation land acquisition programs; and reviews applications for Department of the Army permits, the impact on outdoor recreation resources, and the impact on natural beauty.

The Director of the Bureau of Outdoor Recreation serves as Executive Secretary of the Standing Committee on Outdoor Recreation of the Environmental Quality Council, as established by Executive Order 11472. This Council is composed of the Vice-President and the Secretaries of Interior; Agriculture; Commerce; Health, Education, and Welfare; Housing and Urban Development; and other heads of departments and agencies as the President may direct from time to time. A companion Citizens Advisory Committee on Recreation and Natural Beauty composed of 15 members advises the President and Council on matters relating to all phases of outdoor recreation and natural beauty.

Bureau of Reclamation

Origin and Background Irrigation in the West was practiced by the settlers as early as 1847 and even before that by Indians and mission settlements. With the great migration of the West during the late 1800's, reclamation and settlement of arid lands emphasized the need to provide storage works to conserve flood waters and equalize the flow of streams. Thus, the Bureau of Reclamation was created to carry out an orderly program of planning and construction for full-scale water and land resource development beyond the means of private enterprise.

The Reclamation Act, approved on June 17, 1902, authorized the Secretary of the Interior to locate, construct, operate, and maintain works for the storage, diversion, and development of waters for the reclamation of arid and semiarid lands in the western states. To carry out these objectives, the act provided for the establishment of the Reclamation Fund for planning, construction, and operation of irrigation projects. As a revolving fund, the money expended was to be repaid without interest in 10 years by the owners of the property benefited. The act also provided for acreage limitations in compliance with homestead laws to continue family-size farm opportunities in the West. This provision, which still applies, is that no individual may be served water for more than 160 acres in his ownership, or 320 acres for a man and wife. The act provided that all actions would conform to state laws regarding control, appropriation, use, or distribution of irrigation water.

In July 1902, the Secretary approved the organization of the Reclamation Service within the Geological Survey. In March 1907, the Reclamation Service was removed from the Survey and established under a director. In June 1923, the Secretary created the position of Commissioner of Reclamation and changed the name Reclamation Service to Bureau of Reclamation.

In the early years it was natural to develop single-purpose irrigation projects; however, over the years the Bureau's purposes have been amplified and extended in response to the changing concepts and needs for Federal water resource development. Some of the background leading up to present planning and development of multiple-purpose project follows:

1. Hydroelectric Power. The Reclamation Act was broadened in 1906, with a passage of the Town Site Act, to include power generation as a project purpose. This law also provided that preference be given to municipal use in the sale or lease of power. This provision has evolved into the present

concept of establishing Federal, State, or local government units or cooperative agencies as preference customers.

2. Municipal and Industrial Water Supply. Contracts for municipal and industrial water service were first authorized for towns on or in the vicinity of Federal irrigation projects by the Town Site Act of April 16, 1906. With passage of the Reclamation Project Act of 1939, the furnishing of water for municipal and industrial purposes became a fully recognized purpose of Federal reclamation project development.
3. Fish and Wildlife. Fish and wildlife conservation and development became a full partner in Reclamation projects through the Fish and Wildlife Coordination Act, as amended in 1958.
4. Recreation. Recreation has been recognized as a function of Reclamation reservoirs for many years, and recreation facilities have been provided as authorized by Congress on a project-by-project basis. Pursuant to the Federal Water Project Recreation Act of 1965, recreation (and fish and wildlife) may be recommended as a purpose of a Federal project.
5. Flood Control. The need for flood control has long been considered in the planning of storage reservoirs by the Bureau of Reclamation. The Reclamation Project Act of August 4, 1969, gave the Secretary of the Interior authority to allocate a part of the cost to flood control or navigation after consultation with the Chief of Engineers and the Secretary of War. The Secretary was also authorized to make such rules and regulations as may be necessary to carry out the provisions of the act. In case of older projects, where flood control was not an authorized function but where reservoir operation for flood control is feasible and beneficial, informal flood control plans have been developed and carried out with the approval of the water users.
6. Other Functions. Other purposes such as water quality control and navigation are considered and included as project functions when found to be economically justified.

7. Small Reclamation Projects. The Bureau of Reclamation administers the program authorized under the Small Reclamation Projects Act of 1956. This act, as amended June 5, 1957, and September 2, 1966, established a program under which certain types of organizations can obtain loans for small reclamation projects.
8. Assistance Due to Disasters. The Bureau of Reclamation also provides assistance to existing irrigation projects suffering from natural disasters such as major floods. Upon the President's declaration of a major disaster, the Office of Emergency Planning has the responsibility of coordinating Federal disaster assistance under the Federal Disaster Act of 1950 (Public Law 875). When irrigation systems are involved, the Bureau of Reclamation provides assistance in evaluating the damage; recommends means of rehabilitating the system; and, in some cases, provides supervision during construction of new facilities.

One of the large multipurpose projects which have come to characterize the reclamation program was the Boulder Canyon Project in 1928; another was the Columbia Basin (Grand Coulee Dam) Project in eastern Washington in 1933. The continuing program of reclamation has made irrigation water available from surface and ground-water sources to more than 10 million acres of land to produce annually more than a billion dollars worth of marketable crops. Storage of water for municipal and industrial use serves a population of nearly 11 million. The reclamation program has been responsible for the construction of 225 storage dams and the development of about 6 million kilowatts of installed hydroelectric generating capacity as an integral part of multipurpose facilities. About 35 million visitor-days of recreational use are now recorded annually at reclamation reservoirs. In addition, reclamation facilities provide flood control, water quality control, and fish and wildlife benefits to the Nation.

Purpose and General Responsibility The Bureau of Reclamation's major responsibilities are: (1) investigate and develop plans for potential projects to conserve and utilize water and related land resources; (2) design and construct authorized projects for which funds have been appropriated by the Congress; (3) operate and maintain projects and project facilities constructed by the Bureau, and inspect the operation and maintenance of projects and project facilities constructed by the Bureau but operated and maintained by water users; and (4) negotiate, execute, and administer repayment contracts, water service contracts, and water-user operation and maintenance contracts.

Reclamation investigations follow three main forms:

1. Reconnaissance: to determine if a feasibility (detailed) investigation of a project is justified. The detail and scope are only to the extent necessary to provide preliminary estimates. The report developed for reconnaissance investigations is used for information purposes but not as a document for authorization.
2. Basin Surveys: to develop a comprehensive water resource development plan for an entire river basin. Potential projects are identified in a framework of future development. Projects requiring immediate development may be studied in sufficient detail for congressional authorization.
3. Feasibility: to prepare justifiable plans in adequate detail for seeking congressional authorization for construction of a project.

Local interest and support are primary requirements for starting and carrying out all types of investigations. Feasibility studies must be authorized by Congress before such studies can be initiated.

Policy The concept of reimbursability is a controlling and major influence on all reclamation financial and formulation activities. Federal Reclamation Law requires that all costs allocated to irrigation be repaid to the Federal Government over a 40-year period without interest. Annual operation and maintenance costs also must be fully borne by the water users. The law further provides for an initial development period of up to 10 years during which no repayment of construction costs is required. When appropriate, specific projects are authorized to allow for a 50-year repayment period. Irrigators repay construction costs up to their ability to pay. Costs beyond the irrigators' ability to repay have traditionally been returned to the Treasury through surplus Federal power revenues or other similar means.

In multipurpose projects, costs for flood control, and some parts of costs for designed enhancement of fish and wildlife, recreation, and water quality are nonreimbursable by law. The reimbursable portions of recreation, water quality, and fish and wildlife costs must be borne by a non-Federal public entity. These reimbursable costs, along with the costs of commercial power and municipal and industrial water supply, must be repaid to the Federal Government in 50 years with interest.

Organization and Programs The Bureau of Reclamation is headed by a Commissioner in the Washington, D. C. office, Regional Directors in the regional offices, and Area Engineers in the area planning and development offices within each region. The Pacific Northwest makes up Region 1 with the regional office in Boise, Idaho. Investigations for the Columbia-North Pacific Region were carried out in the three development offices--Snake River Development Office, Boise, Idaho; Upper Columbia Development Office, Spokane, Washington; and Lower Columbia Development Office, Salem, Oregon, under the supervision of the Regional Office. In this study, the Bureau of Reclamation is primarily concerned with identification of irrigation needs and potentials and in the determination and development of effective means to satisfy the needs.

The Bureau has in the past made investigations to various degrees of detail in many areas of the region. Some of the more comprehensive studies were the Columbia River; Umpqua Basin and Umatilla River Basin, Oregon; Clark Fork Basin, Montana; Kootenai River Basin, Idaho-Montana; Walla Walla River Basin, Oregon-Washington; Pend Oreille River Basin, Idaho-Washington; Upper Chehalis River Basin, Washington; Upper Snake River Basin, Idaho, Oregon, Nevada, Utah, and Wyoming; and Southwest Idaho Water Development Project, Idaho. In addition, the Bureau was one of the major contributors for the Type 2 studies in the Willamette River Basin, Oregon, and Puget Sound Basin, Washington. All basic data from these and other studies previously obtained have been utilized in this comprehensive survey.

Federal Water Pollution Control Administration

Origin and Background Responsibilities of the Federal Water Pollution Control Administration (FWPCA) and its predecessor, the Division of Water Supply and Pollution Control of the Public Health Service, significant to comprehensive water resources planning, are those dealing with municipal and industrial (M&I) water supply and water quality control.

Water supply for municipalities and industries has been traditionally a matter of local concern. Where such supplies were included in earlier Federal storage projects, these water supplies were considered vendible products and full reimbursement of cost of including such storage in Federal projects was established policy. The Water Supply Act of 1958 permitted Federal agencies to plan and store water for anticipated future M&I needs. "Reasonable assurance" was required that these waters would be utilized within 10 years of project completion and that a contract covering repayment of cost during the life of the project would then be negotiated. In an amendment to the Water Pollution Control Act of 1961 (P. L. 87-88),

the allocation to M&I water supply was set at 30 percent of the total project cost and the Federal construction agencies were permitted to make their own determination of future M&I needs and include storage capacity without definite contractual commitments. To facilitate study of M&I water supply needs that could be served by planned Corps of Engineers projects, a memorandum of agreement between the Departments of HEW and the Army was negotiated late in 1958. Similar studies involving Bureau of Reclamation projects have also been conducted.

Ever since the turn of the Twentieth Century, increasing emphasis has been placed on water pollution control by Congress. All of the Federal legislation passed until 1948, however, had to do with specific types of pollution or specific river basin investigations. On June 30, 1948, the President signed Public Law 845 which authorized the first comprehensive Federal water pollution control program. The provisions of the act included: development and adoption of comprehensive pollution control programs for surface and ground waters in cooperation with state and local agencies; Federal grants to state and local agencies for the implementation of programs; technical assistance in pollution control studies; aid in financing engineering plans and construction of abatement works; development of uniform state pollution control laws; and provision of Federal enforcement action on interstate waters with the consent of the state in which the pollution originated. The original law, limited to a 5-year period, was subsequently extended to June 30, 1956.

The original act was extended and strengthened in 1956 and again in 1961. Among other changes this latter amendment provided that in the survey or planning of any reservoir the Federal construction agencies consider ". . . inclusion of storage for regulation of streamflow for the purpose of water quality control . . . and that the Secretary of DHEW shall advise said agencies on the need for and value of storage for this purpose." Thus, for the first time, storage for quality control releases was recognized as a function to be included in multipurpose water resource development projects. The Water Quality Act of 1965, among other things, established the administration and authorized development of water quality standards in interstate waters--and the Clean Water Restoration Act of 1966 further amplified and consolidated Federal pollution control programs.

Federal responsibility for pollution control does not begin or end with requiring others to act. Government installations scattered throughout the Nation and located in almost every city also have a responsibility in controlling pollution themselves. Recognizing this, the President issued Executive Order 11288, dated July 2, 1966, to ensure that the Federal Government provides leadership in preventing and abating water pollution in the United States by controlling pollution from all of its installations and activities.

This order has a far-reaching impact since it involves a diversity of installations, such as military bases, hospitals, national parks, forests, Federal water resources projects, and post offices. Recipients of Federal grants, loans, and contracts are also to subscribe to the order, as provided by Section 7. The Federal Water Pollution Control Administration, through a program of review, approval, and technical assistance, cooperates with the other Federal agencies in developing water pollution control plans for Federal installations.

Purpose and General Responsibility In the field of water resources planning and development the Federal Water Pollution Control Administration develops comprehensive plans for water quality and pollution control. This agency also determines municipal and industrial water supply needs for the interagency water resources planning studies. Both of these planning functions are essential to provide the framework for the orderly development of water resources to serve the needs of the Nation's rapidly expanding population and technology. To this end the Public Health Service, the predecessor of FWPCA, initiated, in 1961, a series of comprehensive studies for water supply and pollution control in the major river basins across the country. Similar studies are also carried out on individual water resource development projects at the request of the Federal construction agencies.

Policy The comprehensive water pollution control programs throughout the country are dedicated to enhancing the quality and value of our water resources and to establishing a national policy for the prevention, control, and abatement of water pollution. This is to permit these waters to serve the widest possible range of human needs. Such needs include the use of water courses for waste assimilation, but only after subjecting the wastes to treatment or control to the degree technically possible. The emphasis, then, in developing these programs, is on prevention of water pollution as well as on control of existing pollution.

The basic policy in the Federal program has always been based upon the recognition and preservation of the primary responsibility of the states in preventing and controlling pollution. This has been manifested in Federal programs aimed at supporting the states' efforts.

The Federal Water Pollution Control Act requires that storage in Federal water resource projects for water quality control releases cannot be used in lieu of waste treatment or control at the source. Before any such storage or releases can be recommended, "adequate" waste treatment must be practiced.

Organization and Programs The FWPCA is organized along five fronts to meet its responsibilities in pollution control and abatement.

1. Comprehensive Planning cooperates with state, interstate, and other agencies in developing long-range water quality management plans. Planning activities are pointed towards three areas:
(a) A basinwide comprehensive water quality management plan is scheduled to be completed for the Columbia River Basin and adjacent coastal areas in 1968. It will provide the broad framework of immediate and long-range needs and alternative solutions for water quality management in the basin. (b) Studies of the need for storage in proposed Federal reservoirs for the regulation of streamflow for quality control purposes are underway for several projects in the Northwest. And, finally, (c) Grants are made to state pollution control agencies to enlarge and improve their total programs. The states are also assisted in their planning efforts by a 3-year program of FWPCA grants of up to 50 percent of the administrative expenses of their planning program. A complementary program, in its first stages, provides funds to local planning agencies to encourage the development of effective water quality control and abatement plans for individual basins.
2. The Facilities Program is divided into two primary areas of responsibility. The Grants program administers the issuance of Federal grants to cities for construction of sewage treatment works. The Federal Facilities Program is concerned with prevention, control, and abatement of water pollution from Federal activities. A significant activity involves the large land and recreation areas under Federal management.
3. The Enforcement Program carries out enforcement measures against pollution of interstate navigable waters. Enforcement conferences have been held on the lower Columbia River, lower Snake River, and Puget Sound waters. These conferences have resulted in recommended schedules of waste treatment measures to be instituted by municipalities and industries.
4. Research and Development aims their program at finding answers to complex pollution problems and cheaper means of pollution abatement. Demonstration

grants are available to agencies and industries for new and improved methods of controlling pollution and treating wastes.

5. Technical Programs provides technical assistance to states, other agencies, industries, and individuals on pollution problems. A national network for water quality monitoring is also a part of this program.

Other Agencies

Office of Saline Water The Office of Saline Water performs functions vested in the Secretary of the Interior by the Act of July 3, 1952 (66 Stat. 328, as amended; 42 U.S.C. 1951-1958). These functions provide for research and development of practical means for the economical production, from sea or other saline water, of water suitable for agricultural, industrial, municipal, and other beneficial consumptive uses. This program is conducted by means of grants and contracts with universities, private research groups, industrial organizations, and in cooperation with other Federal agencies.

The Saline Water Demonstration Act (72 Stat. 1706; U.S.C. 1958a-1958g) authorized the construction and operation of saline water conversion demonstration plants in various parts of the country. An amendment to the basic Saline Water Act of 1952 (66 Stat. 328, as amended; 42 U.S.C. 1951-1958) changed these demonstration plants into research and development test beds and thus made them a part of the basic research and development program. Two sea water conversion plants and two brackish water conversion plants, all outside the Columbia-North Pacific Region, have been constructed, operated, and tested.

The Office of Saline Water also carries out a program of coordination and exchange of information concerning saline water conversion research; preparation of information on the subject; planning and management of meetings and symposiums; and coordination and integration of the results of its activities with private and public organizations.

Office of Water Resources Research The Office of Water Resources Research (OWRR) administers the program of water resources research and training that was authorized by the Water Resources Research Act of July 17, 1964 (78 Stat. 329; 42 U.S.C. 1961). The program provides for the promotion and support of research programs and training in the study of water supply and of resources which affect water.

The OWRR does not conduct its own, or in-house research; it supports research and training through annual allotments and matching grants to each of 51 state water resources research institutes as authorized by the act and through contracts and grants to individuals and private and public agencies that have competence in water resources research.

Other functions of OWRR are to promote exchange of information and coordination to minimize undesirable duplication of research effort and to encourage research to fill information gaps and focus high priority research needs.

The International Joint Commission--United States and Canada

The International Joint Commission was organized in 1911 pursuant to the treaty of 1909 between the United States and Great Britain.

Purpose and Objectives The purpose of the Commission is to prevent disputes regarding the use of boundary waters; settle questions between the United States and Canada involving rights, obligations, or interests of either along the common frontier; and to make provisions for the adjustment and settlement of all such questions which may arise.

In general terms, the treaty provides in Article III in respect to "boundary water," i.e., waters through which the International Boundary passes, that in addition to uses, obstructions, and diversions heretofore permitted or hereafter provided for by special agreement between the High Contracting Parties, no further uses or obstructions or diversions, whether temporary or permanent, on either side of the line, affecting the natural level or flow of "boundary waters" on the other side of the line shall be made except with the approval of the International Joint Commission.

With respect to streams and rivers flowing from "boundary waters" or flowing across the boundary from one country to the other, the treaty provides in Article IV that, except in cases provided for by special agreement between the High Contracting Parties, no remedial or protective works or any dams or other obstructions shall be placed in such waters, the effect of which would be to raise the natural level of waters on the other side of the boundary unless the construction or maintenance thereof is approved by the International Joint Commission.

Under Article IX of the treaty, the High Contracting Parties further agree that any other questions or matters of difference arising between them involving the rights, obligations, or interests

of either in relation to the other or to the inhabitants of the other, along the common frontier, shall be referred from time to time to the International Joint Commission for examination and report whenever either Government shall request that such questions or matters of difference be so referred.

In each case so referred, the International Joint Commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed in respect thereto by the terms of the Reference.

Aside from international waterway problems, the treaty further provides in Article X that any questions or matters of difference arising between the High Contracting Parties involving the rights, obligations, or interests of the United States or of the Dominion of Canada either in relation to each other or to their respective inhabitants, may be referred for decision to the International Joint Commission by the consent of the two parties. In each case so referred, the Commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate.

Organization and Programs The Commission consists of six members, three appointed by the President of the United States and three appointed by the Government of Canada. The addresses of the two sections are as follows:

| <u>U. S. Section</u> | <u>Canadian Section</u> |
|-------------------------------------------------------|------------------------------------------------|
| 1711 New York Avenue, N.W. Washington, D. C. 20440 | 151 Slater Street Ottawa 4, Ontario, Canada |

The Commission has jurisdiction over all cases involving use, obstruction, or diversion of boundary waters between the United States and Canada; waters flowing from boundary waters; and waters at a lower level than the boundary in rivers flowing across the boundary.

Except in cases of special agreement, the approval of the Commission is required for the construction and maintenance of any works that would raise the natural level of boundary waters and for works that would back water above the natural level at the boundary in waters crossing the boundary. The Commission acts also to prevent pollution of boundary waters and waters crossing the boundary. The Commission's Rules of Procedure and Text of Treaty may be obtained free of charge on request to the Commission's Secretary.

In the handling of the various projects, the Commission has at times found it necessary to provide for the creation of international boards of control.

These boards in each case consist of men from the responsible agencies in each country, the membership being one-half Canadian and one-half from the United States. The functions of the boards are to ensure that the provisions of the Commission's Orders of Approval are observed. The boards form the effective machinery in the field to ensure the observance of the international obligations which are embodied in the Commission's Orders. The boards report directly to the Commission, and in the event of disagreement between their members, the decision rests with the Commission.

The International Columbia River Board of Control is comprised of Mr. Leslie B. Laird, District Chief, Water Resources Division, U.S. Geological Survey, Department of the Interior, Room 300, 1305 Tacoma Avenue South, Tacoma, Washington 98402, from the United States, and Mr. H. T. Ramsden, District Engineer, Water Resources Division, Department of Energy, Mines, and Resources, 325 Granville Street, Vancouver, British Columbia, from Canada.

Department of Labor

Origin and Background

The Department of Labor was established on March 4, 1913, for the primary purpose of maintaining and improving the well-being of all people of the United States. The Department participated in the initial phases of the study as a member of the Columbia Basin Inter-Agency Committee.

Purpose and General Responsibility

The Department of Labor, through its Manpower Administration, which administers the Federal and State system of employment offices and unemployment insurance and several of its other bureaus, is closely related to this planning effort. Assistance in the review has been provided in the fields of labor economics and in furnishing farm, industrial, and other employment information.

Policy

The Department recognizes that the relationship of people and employment opportunities to water resources planning is of first importance since all resources planning should be oriented to meet the needs and wants of people.

Organization and Programs

The Manpower Administration and the Bureau of Labor Statistics, of the Department of Labor, have provided statistical information on labor economics and employment. Upon request, specialized information can be developed in labor market analysis.

Department of Transportation

U.S. Coast Guard

The responsibilities of the United States Coast Guard in water and related land resources management stem from the statutory missions of this agency. As the Federal maritime law enforcement agency, it is responsible for water pollution control and the enforcement of regulations to prevent pollution and/or reduce the undesirable effects of unavoidable pollution from navigation. In addition to this, the following are responsibilities of the Coast Guard:

1. The establishment, operation, and maintenance of aids to navigation.
2. Search and rescue missions, including the development of systems and operational control and administration of all related activities.
3. Administration of the Recreational Boating Program and regulations pertaining thereto.
4. The establishment of anchorage areas and the enforcement of pertinent regulations.
5. Administration of drawbridge regulations and approval or disapproval of the location and clearance of bridges and causeways over the navigable waters.
6. The general port safety, channel improvement, and port development.

Laws,
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STATE LAW, POLICIES, AND ADMINISTRATION

INTRODUCTION

As is typical in the West, the states in the Columbia-North Pacific Region developed under a set of water laws based upon appropriation for beneficial use, with the first in time, the first in right. This basic principle still underlies most State water law. In the early period of settlement, uses were largely confined to mining, domestic supply, and limited irrigation, with navigation where physically possible.

As the region grew, irrigation and municipal and industrial supply assumed greater importance. Some streams were completely appropriated in many months, often to the detriment of resident fish and sometimes even anadromous fish. Conflicts arose between competing water users. State water law changed to meet the growing problems, and complex administrative structures were gradually evolved to handle the water management problems at the local and state levels. Interference between ground-water users has occurred in places, and most states have developed legislation and administrative structures to meet this problem.

These are only illustrative of some of the problems which have been met or are being considered. The important point is that State water law in the Northwest has evolved over the years to meet the problems. With a fixed supply and rapidly growing demands, the problems have multiplied at a greatly accelerated rate in recent years. Likewise, State water law and the administrative structure to handle water problems have been changing rapidly. Such changes will undoubtedly continue in the future. The long-range planning efforts underway in all of the Northwest States and the studies being coordinated by the Pacific Northwest River Basins Commission will no doubt be instrumental in bringing about many of the future changes.

The following sections of this appendix deal with laws, policies, and administration relevant to water and related lands in the States of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming, as it was in about 1969. The material was prepared by each of the respective states as background for the framework plan formulation process.

LEGAL AND ADMINISTRATIVE BACKGROUND
FOR
STATE OF IDAHO



PREPARED BY
IDAHO DEPARTMENT OF RECLAMATION
R. Keith Higginson
State Reclamation Engineer
and
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Assistant Attorney General
Boise, Idaho

IDAHO

State Water LawEstablishment of Property Rights in Water

Property rights in water are established under the doctrine of prior appropriation. The appropriation doctrine was first established by the territorial legislature in 1881. Idaho Laws of 1881, p. 267. In 1889 with the admission of the State to the Union, the appropriation doctrine was specifically incorporated into the Idaho Constitution. Idaho Constitution, Article 15, Sections 1-6.

The doctrine of prior appropriation prevails in Idaho to the exclusion of the riparian doctrine. There are a number of State Supreme Court decisions specifically repudiating the establishment of the riparian doctrine; however, a few early decisions by the Court held that riparian rights exist in Idaho but that they would not exist against an appropriator of the water. Hutchinson v. Watson Slough Ditch Co., 16 Idaho 484, 101 Pac. 1059 (1909). See Johnson v. Utah Power and Light Company, 215 Fed. 2nd 814 (9th Cir. 1954); Schodde v. Twin Falls Land & Water Company, 224 U.S. 107 (1912). There are a number of decisions which have considered and determined the respective rights of riparian owners in relation to other riparian and nonriparian owners to the use of the waters of lakes and streams where claims of appropriations were not involved. However, the question appears to be settled that, as between a riparian owner and an appropriator, the appropriator will prevail to the exclusion of the riparian owner.

While the Idaho Constitution in declaring that the appropriation doctrine exists within the state refers only to the right to appropriate the waters of a natural stream, court decisions have extended the right to appropriate all waters except those that may be classified as the private property of one person. See Public Utilities Commission v. Natatorium Co., 36 Idaho 287, 211 Pac. 533 (1922); King v. Chamberlin, 20 Idaho 504, 118 Pac. 1099 (1911).

The appropriation doctrine has been extended by statute to the waters of rivers, streams, lakes, springs, and subterranean waters. Idaho Code, Section 42-103 (1947). The right to appropriate waste, seepage, and spring waters from ditches constructed for the purpose of utilizing those waters is granted by statute. Idaho Code, Section 42-107 (1947). No distinction is made between underground waters that percolate or those that flow in defined directions. Bower v. Moorman, 27 Idaho 162, 147 Pac. 496 (1915); Hinton v. Little, 50 Idaho 371, 296 Pac. 582 (1931).

Methods of Perfection and Appropriation

Of those waters which are subject to appropriation, there are two methods by which one may perfect a right, the "statutory" method and the so-called "constitutional" method.

The Idaho Constitution, Article 15, Section 3, contains a provision that the right to divert and appropriate the unappropriated waters of any natural stream for beneficial uses shall never be denied, except that the State may regulate and limit the use thereof for power purposes. With the exception of the specific provision relating to the appropriation of water for power purposes, this constitutional declaration has been construed as authorizing a person to appropriate water simply by actually diverting and applying water to beneficial use. Sandpoint Water & Light Co. v. Panhandle Development Company, 11 Idaho 405, 83 Pac. 347 (1905). The foundation of this constitutional right to appropriate waters is founded on the case of Nielsen v. Parker, 19 Idaho 727, 115 Pac. 488 (1911), wherein the Idaho Supreme Court, in calling attention to this constitutional provision, held that the legislative act of 1903 creating the permit system, although mandatory in the sense of requiring a permit to perfect an appropriation, was not intended to create an exclusive method by which water could be appropriated.

All waters of the State, except those which may fall within the small classification of private waters, are subject to appropriation. Prior to 1963, a person could appropriate water by following either one of two methods, i.e. by simply diverting the water and applying it to beneficial use (the so-called "constitutional method") or by proceeding under the permit procedure (the "statutory method").

In 1963 the legislature passed a statute requiring each appropriator of ground water to follow the "statutory method," thus excluding the "constitutional method" as a means of appropriating ground water after that date, March 25, 1963. All waters found beneath the surface of the ground, in whatever form, are within the classification of ground waters.

Some question has existed as to whether the legislature could, under the Idaho Constitution, establish a mandatory permit system for the appropriation of ground water. Nielson v. Parker, 19 Idaho 727, 115 Pac. 488 (1911). In 1968 the Idaho Supreme Court held that the permit procedure for the appropriation of ground water was constitutional, in the case of Tappan v. Smith, 92 444, P. 2d 412, (1968). To date no statute has been passed making the statutory procedure the exclusive method for the appropriation of any water except ground waters.

The "constitutional method" for appropriating water simply requires the act of diverting and applying the water to beneficial use. No notice of an intent to appropriate is necessary. The only acts which are necessary to complete the appropriation are the physical ones of diverting and applying the water to beneficial use.

A person seeking to appropriate water under the "statutory method" must file an application for a permit with the State Reclamation Engineer. If the permit is issued, the applicant must proceed in accordance with the requirements of the statute and within the time period specified by the State Reclamation Engineer in applying the water to beneficial use.

Where both methods are available to the intending appropriator, neither method gives a right more superior to the other. The only difference is that of the establishment of the date of priority. An individual proceeding under the constitutional method acquires a right dating from the date that he first places the water to beneficial use. A person completing an appropriation under the statutory method acquires a priority date as of the time he files his application for the permit. The apparent advantage of the statutory method over the constitutional method is the establishment of an earlier priority and having documentary proof of the priority date and the quantity of water which has been appropriated.

The procedure for appropriating water under the statutory method is commenced by filing an application with the State Reclamation Engineer of the Department of Reclamation. The application must contain the name and address of the applicant, the source of the water supply, the nature of the proposed use or uses, and the period of the year during which water is to be put to beneficial use, the location of the point of diversion and description of the proposed ditch, channel, well, or other works, the amount of water to be diverted and used, and the time required for the completion of construction of such works and application of the water to the proposed use which must not exceed 5 years. The application must be accomplished by a plan and map of the proposed works. Whenever the applicant seeks to appropriate water which requires storage in a reservoir, he must specify the quantity, in acre-feet, which he intends to appropriate. The appropriator is limited to no more than one cubic foot per second for each 50 acres of land to be irrigated or no more than 5 acre-feet of water for each acre of land unless it can be shown to the satisfaction of the Department of Reclamation that a greater amount is necessary.

If the applicant seeks to appropriate more than 25 cubic feet per second of water, develop more than 500 theoretical horsepower, or impound water in a reservoir with an active storage

capacity in excess of 10,000 acre-feet, the applicant may be required by the State Reclamation Engineer to submit a statement of his financial resources. Idaho Code, Section 42-202. The application must be accompanied with a filing fee which serves the function of paying for legal advertising and investigations of the Department of Reclamation. The following fees are charged:

1. For a quantity of 0.5 cfs or less or for storage volume of 50 acre-feet or less . . . \$10.00
2. For a quantity greater than 0.5 cfs but not exceeding 17 cfs or for storage volume greater than 50 acre-feet, but not exceeding 1,700 acre-feet . . . \$20.00
3. For a quantity in excess of 17.0 cfs or 1,700 acre-feet . . . \$100.00.
Idaho Code, Section 42-221 (Supp. 1967)

The State Reclamation Engineer publishes notice in a newspaper specifying the name and address of the applicant, source of water supply, amount to be appropriated, the nature of the proposed use, approximate location of the planned diversion, and the place of use. Anyone desiring to protest against the approval of the application is required to file a protest in the form prescribed by the Department of Reclamation within 10 days from the last date of the publication of notice. The notice is published in a newspaper within the county wherein the point of diversion lies once a week for two consecutive weeks. If a protest is filed, the State Reclamation Engineer conducts a hearing pursuant to the provisions of the Idaho Administrative Procedures Act. The State Reclamation Engineer is required to find and determine from the evidence presented what use or uses the water sought to be appropriated can be and are intended to be applied, whether the proposed use is such that it will reduce the quantity of water available to supply existing water rights, whether the application is made in good faith and not for delay or speculative purposes, and whether the applicant has sufficient financial resources with which to complete the work contemplated. The State Reclamation Engineer can deny a permit if the applicant fails to meet the above requirements. An appeal is provided from the State Reclamation Engineer's decision to the district court.

The approval of an application shall be endorsed thereon and it then becomes a permit. The State Reclamation Engineer's endorsement must require that the water be put to beneficial use within a period of no more than 5 years. If at the end of the 5-year period the applicant has been unable to place the water to beneficial use, specific provision is made for an extension of time where good cause is shown for an additional 5-year period.

Additional extensions can be granted in particular instances. Idaho Code, Section 42-204 (Supp. 1967). If the State Reclamation Engineer finds that a lesser quantity of water was put to beneficial use than that applied for, he must grant a license for that lesser amount. The license, which is the final step in the permit procedure, is prima facie evidence of the establishment of a water right. Idaho Code, Section 42-220 (1947).

If a project proposal involves the impoundment of water in a reservoir with an active storage capacity in excess of 10,000 acre-feet, the proposal must also be submitted to the Idaho Water Resource Board. Idaho Code, Section 42-1737. No construction is permitted on any such project prior to approval by the Board. The Board, in determining whether an application for a permit should be approved or disapproved, is guided by the following criteria:

1. Conserving the highest use of the water for all purposes.
2. The maximum economic development of the waters involved.
3. The control of the waters of the state for all beneficial purposes, including drainage, sanitation, and flood control.
4. Whether there is sufficient water available for appropriation.
5. The prevention of wasteful, uneconomical, impracticable, or unreasonable use of the waters involved.
6. That all vested and inchoate rights to the waters of the state or the use thereof have been protected by the issuance of a permit by the State Reclamation Engineer.
7. The State water policy as formulated by the Board and as may have been adopted under other laws of the state.

The Board makes its finding in regard to a proposal after a hearing. The sponsor of a project which has received disapproval by the Board may obtain review thereof by appeal to the district court. The review by the district court is limited to the question of whether the Board has regularly pursued its authority and whether there is substantial evidence to support its factual findings. If the Board does not approve a project or if its decision is appealed and is sustained, the proponent of the proposal is prohibited from constructing the project.

Private Waters

The Department of Reclamation is prohibited from issuing or granting a permit to divert or appropriate the waters of any lake not exceeding 5 acres in surface area at high water mark which is located or situated wholly upon the lands of a person or corporation, without the written permission of the owner. Idaho Code, Section 42-212. However, where the waters from any natural spring or lake flow off the premises on which they arise or have a source of supply beyond the premises, they are considered public waters, subject to appropriation and diversion. Jones v. McIntire, 60 Idaho 338, 91 P. 2d 373 (1939); Maher v. Gentry, 67 Idaho 559, 186 P. 2d 870 (1947). See Public Utilities Commission v. Natatorium Company, 36 Idaho 287, 211 Pac. 533 (1922); King v. Chamberlin, 20 Idaho 504, 118 Pac. 1099 (1911).

Superiority of Method of Appropriation

There is no superiority of the right obtained under either method of appropriating water over that obtained under the other method, other than with respect to the date or priority of the right. If the intending appropriator is proceeding under the constitutional method and perfecting his right by actual diversion and application of water to beneficial use, his right dates from the date that water was put to beneficial use. If the intending appropriator completes his appropriation under the statutory method, his right dates from the date his application was filed with the State Reclamation Engineer unless he fails to submit proof of application to the beneficial use within the period specified, then his application is backdated for each day that proof is late. As among those perfecting their right under the two different methods, the question of who has a superior right depends solely upon the date of each appropriator's priority.

Adjudication

Those having perfected their right either under the constitutional method or the statutory method of appropriation can obtain a court determination or adjudication of their right. The adjudication can be commenced in either of two ways. Suit can be filed by private parties in the district court for the purpose of adjudicating their rights to the used ground or surface water. Idaho Code, Sections 42-237(f) and 42-1401 (Supp. 1969). If the judge of the district court desires that an examination of the water system be made by the Department of Reclamation, provision is made for the appointment of the Department to conduct the investigation. The results of the investigation are considered as any other evidence adduced in the case by the parties.

An adjudication can also be commenced by the State Reclamation Engineer upon his own initiative or upon petition signed by five or more or a majority of the users of water from any water system. The adjudication can be over all or any part of a water system including streams, lakes, ground waters, or any other body of water, tributaries and contributory sources thereto. Idaho Code, Section 41-1406 (Supp. 1969).

The adjudication is instituted by a petition filed by the State Reclamation Engineer with the district court and is in the form of a request for an order authorizing him to commence an investigation and determination of the various water rights existing within a defined area. The district judge conducts a hearing receiving testimony by the various users on the question of whether the waters included in the water system are interconnected. If he finds that the petition includes waters which are not tributary or excludes waters which are tributary and which should be included to achieve a complete adjudication of all rights which might be affected thereby, an order is issued accordingly defining the boundaries of all or part of the water system to be adjudicated and authorizing the State Reclamation Engineer to commence the investigation and determination of the various water rights existing within the system. Idaho Code, Section 41-1407 (Supp. 1969). In accordance with the order, the State Reclamation Engineer must commence the examination of the water system, the canals and ditches and other works diverting water therefrom, and the land being irrigated by such canals and ditches and other works, and other uses being made of the water diverted from the system. The State Reclamation Engineer is required to prepare a map or maps showing the results of his investigation, the water system, the canals and ditches and other lands thereunder, listing the names of the users of water and the location of their uses. The State Reclamation Engineer, to aid him in obtaining the information, is authorized to request the district court to issue subpoenas to require the attendance of witnesses or the production of documents. Idaho Code, Section 42-1408 (Supp. 1969).

Upon completion of the Engineer's investigation, he is authorized to request the district judge to join all claimants he has found using the water from the system in the action for the purpose of adjudicating their rights. Service upon all known claimants is made by publication in a newspaper of general circulation published in the county for three consecutive weeks and mailing by certified mail to each claimant at his last known post office address. The order authorizing joinder directs each claimant to file a notice of claim with the State Reclamation Engineer. The notice of claim is submitted on forms furnished by the Department of Reclamation and must be signed and verified by the claimant and contain the following information:

1. Name and post office address of the claimant;
2. Quantity of water claimed to be used in cubic feet per second with the quantity of water stored in acre-feet per year;
3. The date of priority claimed and the date when the water was first applied to beneficial use, and if the right is founded upon a license or permit, the number thereof;
4. The legal description of the location of the diversion works;
5. Nature of the use and period of the year when water is used for such purposes;
6. Legal description of the place of use;
7. Dates of any changes or enlargements in use, including dimensions of the diversion works as originally constructed and as enlarged;
8. Such other facts as the State Reclamation Engineer may require to show the extent and nature of the right and ensure compliance with the law in acquiring the right claimed.

The notice of claim must be filed with the State Reclamation Engineer within 60 days of the date of completion of the service. The maps prepared by the State Reclamation Engineer are available at the office of the State Reclamation Engineer and at such places as he designates for the purpose of aiding any claimant in preparing and filing his claim. Idaho Code, Section 42-1409 (Supp. 1969).

The State Reclamation Engineer is required to examine each claim filed and prepare a report in the nature of a proposed finding of water rights. The report, together with each claim filed in his office, shall be filed with the district court and a copy of the report sent to each claimant or his attorney at the last known post office address. The report of the State Reclamation Engineer constitutes prima facie evidence of the nature of the rights existing within the water system. Any claimant who desires to object to the report must file his objections with the court within 60 days from the date of mailing such report by the State Reclamation Engineer. A copy of the objections must also be filed with the State Reclamation Engineer. The State Reclamation Engineer, within 20 days of receipt of notice of objection, is required to file his response thereto with the district court. Hearings are held by the district court, without a jury, on each objection to the report of

the State Reclamation Engineer. The hearing before the judge in all other respects, is the same as that under the rules governing other civil actions. The district court may take additional evidence on any issue and may, if necessary, refer the case back to the State Reclamation Engineer for further examination. Upon conclusion of the hearing or hearings, the district judge shall determine the nature of each right where a notice of objection was filed and enter a decree accordingly. When no objection is filed with regard to any right found to exist by the State Reclamation Engineer as evidenced by his report, the district judge shall affirm the right as found. The decree shall in every case include the water rights adjudged to each party, the priority, the amount, season of use, purpose of use, point of diversion and place of use of water, and acreage of the tract to which the water right is appurtenant, together with other facts as may be necessary to define the right. Idaho Code, Section 42-1410 (Supp. 1969).

The decree is conclusive as to the rights of all existing claimants upon the water system as defined in the district judge's order authorizing the examination by the State Reclamation Engineer. The decree is binding upon all claimants who fail to appear and submit proof of their claim, and is a bar to a subsequent assertion of a right theretofore acquired upon the waters included within the determination.

Limitations on the Appropriation of Ground Water

As previously discussed, ground waters in whatever form are subject to appropriation. The right of appropriation may be limited by the following language appearing in Idaho Code, Section 42-226 (Supp. 1967):

"It is hereby declared that the traditional policy of the State of Idaho, requiring the water resources of this state, to be devoted to beneficial use in reasonable amounts through appropriation, is affirmed with respect to the ground water resources of this state as said term is hereinafter defined; and, while the doctrine of 'first in time is first in right' is recognized, a reasonable exercise of this right shall not block full economic development of underground water resources, but early appropriators of underground water shall be protected in the maintenance of reasonable ground water pumping levels as may be established by the state reclamation engineer as herein provided. All ground waters in this state are declared to be the property of the state, whose duty it shall be to supervise their appropriation and allotment to those diverting the same for beneficial use. All rights to the use

of ground water in this state however acquired before the effective date of this act are hereby in all respects validated and confirmed."

No reasonable ground-water pumping levels have been established by the State Reclamation Engineer.

The appropriation of ground water within the state can be further restricted by the establishment of critical ground-water areas as designated by the State Reclamation Engineer. The critical ground-water area is defined as any ground-water basin, or designated part thereof, not having sufficient ground water to provide a reasonably safe supply for irrigation of cultivated lands, or other uses in the basin at the then current rates of withdrawal, or rates of withdrawal projected by consideration of valid and outstanding obligations or permits, as may be determined and designated from time to time by the State Reclamation Engineer. The State Reclamation Engineer in designating an area as a critical ground-water area is required to hold public hearings. Notice of the hearings must be published for two consecutive weeks in a newspaper of general circulation in the immediate area prior to the date set for the hearing. Where a critical ground-water area has already been designated, the State Reclamation Engineer follows the same procedure in amending or modifying the designation of boundaries thereof. Once an area has been designated as a critical ground-water area, no further appropriation or diversion of water from the basin is permitted. The authority of the State Reclamation Engineer to designate a critical ground-water area was challenged and sustained in the case of Tappan v. Smith, 92 444, P. 2d 412, (1968).

The State Reclamation Engineer pursuant to Idaho Code, Section 42-226 (Supp. 1967), has been given statutory authority to regulate the appropriation and diversion of ground water within the state. Coincident with that authority, the State Reclamation Engineer is empowered to:

1. To require all flowing wells to be so capped or equipped with valves such that the flow of water can be stopped when the wells are not in use.
2. To require both flowing and nonflowing wells to be so constructed and maintained such as to prevent the waste of ground water through leaking valves, casings, pipes, or pumps, either above or below the land surface.
3. To prescribe uniform standard measuring devices for the scientific measurement of water levels in the waters withdrawn from wells.

4. To go upon all lands, both public and private, for the purpose of inspecting wells, pumps, casings, pipes, fittings, and measuring devices, including wells used or claimed to be used for domestic purposes.
5. To order the cessation of use of the well pending the correction of any defect.
6. To commence actions to enjoin the illegal opening or excavation of wells or withdrawn or use of water therefrom, and to appear and become a party to any action or proceeding pending in any court or administrative agency where it appears to the State Reclamation Engineer that the determination of such action or proceeding might result in depletion of the ground-water resources of the state.
7. To supervise and control the exercise and administration of all rights acquired to the use of ground waters, and in the exercise of this power by summary order, to prohibit or limit the withdrawal of water from any well during any period that he determines that there is no water available to fill that water right. Water is not deemed available to fill a water right in a well if withdrawal therefrom results in withdrawing the ground water at a rate beyond the reasonably anticipated average rate of future natural recharge.

Administrative Determination of Adverse Claims to the Use of Ground Water

Aside from the adjudication procedure as outlined previously, there is also available for those having rights to the appropriation of ground waters a procedure for the administrative determination of their water rights. Idaho Code, Section 42-237(d). Whenever any person owning or claiming a right to the use of any surface or ground-water right believes that his right is being adversely affected by one or more users of ground water with a later priority, or where any person owning or having the right to the use of a ground-water right feels that the use of his right is being adversely affected by another's use of a ground-water right or a surface-water right, he may petition the State Reclamation Engineer for the creation of a local ground-water board. The petition must contain the following information:

1. The name and post office address of the claimant.
2. A description of the water right claimed by the claimant, with the amount of water, date of priority, mode of acquisition, and place of use of the right, and if the right is for irrigation, a legal description of the lands to which such right is appurtenant.
3. A similar description of the right or rights which are allegedly interfering with the claimant's right, insofar as a description can be ascertained by the claimant.
4. A detailed statement in concise language of the facts upon which the claimant founds his belief that the use of his right is being adversely affected. A copy of the petition to the State Reclamation Engineer must be served upon each of the persons who are alleged as interfering with the claimant's right.

A local ground-water board is formed for the purpose of hearing testimony on the claim. The board consists of the State Reclamation Engineer, a person who is a qualified engineer or geologist, appointed by the district judge of the judicial district in which the well of the persons alleged to be interfered with right is located, and a resident irrigation farmer of the county in which the person claimed to be interfering with the right is located as appointed by the State Reclamation Engineer and the engineer appointed by the district judge. Idaho Code, Section 42-237(d).

The hearing conducted by the board is under rules and regulations as adopted by the State Reclamation Engineer. All parties to the hearing, as well as the board, shall have the right to subpoena witnesses. The board is authorized to determine the existence and nature of the respective water rights claimed by the parties and whether the use of the junior right affects the use of the senior right. The board may order as a result of its findings the holders of the junior right to cease use of the water during such period or periods as the board may determine. Any person dissatisfied with any order of the local ground-water board may appeal to the district court. An appeal stays the execution of the board's order. The hearing before the district court is a trial anew on the claims of the parties.

Submission of Claims to Water Rights

Specific provision was added by the legislature in 1967 by which those having a claim founded upon an appropriation by the "constitutional" method can submit notice of that fact to the Department of Reclamation in affidavit form to provide a record of that right. The claimant must specify his name and address, the quantity of water claimed, the source of that water, the location of the point or points of diversion, the nature of the use and the period during each year when the water was used, the priority of the right claimed as based upon the date the water was first put to beneficial use, and a description of the lands irrigated. Notice of the claim is published once a week for two consecutive weeks in a newspaper published in general circulation in the county where the water claimed are diverted. At any time after the filing of the claim, any person who disagrees with the establishment of a right as set forth in the claim, may file an exception thereto in duplicate, also in affidavit form, accompanied by such proof that the person deems appropriate. An exception filed in this manner is considered the same as any other evidence in the file. Idaho Code, Section 42-225(a-b) (Supp. 1967).

A claim is not declared to be prima facie evidence of a water right like that of a license issued under the permit procedure. The claims are used by the Department of Reclamation pursuant to Idaho Code, Section 42-225 (Supp. 1967), in preparing examinations and surveys of the appropriations and diversions of water from streams.

Appropriation of Water for Power Purposes

As pointed out previously, the constitutional provision which gave rise to the establishment of two methods of appropriated water in the state contains an exception to the effect that the appropriation of water for the purpose of producing power may be regulated by the legislature. The legislature in 1937 passed a statute which requires every individual intending to appropriate water for power purposes to first obtain a permit. Idaho Code, Section 42-205 (1947). A permit to appropriate water for power purposes cannot be issued to persons who are not actual bona fide residents of the state or to any corporation unless organized or qualified to do business in and under the laws of the State of Idaho. Idaho Code, Section 42-206 (1947). No transfers or assignments of permits are permitted unless the assignee possesses the qualifications of the original applicant and the application is made in good faith and not for purposes of speculation or delay. Any attempt to assign, transfer, sell, or mortgage permits for power purposes must be immediately voided by the State Reclamation Engineer. The authority of the State Reclamation Engineer to

restrict the issuance of permits to appropriate water for power purposes has never been tested in the Idaho Supreme Court.

Uses for Which Appropriations Can Be Made

Under Article 15, Section 3, of the Idaho Constitution, specific reference is made to the appropriation of water for agricultural, mining, manufacturing, milling, power, and domestic purposes. The language appearing in the Constitution listing the various purposes for which water can be appropriated is not by its terms restrictive in the sense that other uses of water would not suffice for a water right, but rather, is, by its terms, a listing of the more preferential uses to which water may be put. The order of preference established by this section of the Constitution in giving a preference to one use over another use does not allow the holder of a preferred use to take a lesser use except through eminent domain proceedings.

Idaho Code, Section 42-101, (1947) authorizes the appropriation of water for any beneficial purpose. The Idaho Supreme Court has not been called upon to determine whether a particular use, different from those mentioned in the Constitution, could sustain an appropriative right; however, it is assumed that the Court would look to the actual use and if for a beneficial purpose, would sustain the use.

The claim to a water right for a recreational use has not directly been before the Idaho Supreme Court. A right of recreation, however, has been held to be sufficient consideration to limit another appropriator's use. Payette Lakes Protective Ass'n v. Lake Reservoir Company, 68 Idaho 111, 189 P. 2d 1009 (1948); Twin Lakes Improvement Ass'n v. East Greenacres Irrigation Dist., 90 Idaho 281, 409 P. 2d 390 (1965). A recreation use has received legislative approval by the authorization in the Governor to appropriate all the unappropriated waters of Big Payette Lake, Priest Lake, Pend O'Reille Lake, and Coeur d'Alene Lake for the preservation of the water in those lakes for scenic beauty, health, recreation, transportation, and commercial purposes for all the inhabitants of the state. Idaho Code, Section 67-4301 through 67-4306.

A domestic use was approved in the case of Arkoosh v. Big Wood Canal Company, 48 Idaho 383, 283 Pac. 522 (1929). Appropriation of water for the purposes of operating a mill has been approved in two cases. Washington State Sugar Co. v. Goodrich, 27 Idaho 26, 147 Pac. 1073 (1915); Union Grain & Elevator Co. v. McCammon Ditch Co., 41 Idaho 216, 240 Pac. 443 (1925). A multiple use was approved in the case of Cottonwood Water & Light Co. v. St. Michael's Monastery, 29 Idaho 761, 162 Pac. 242 (1916), where the appropriator sought to place the water to use for drinking, cooking, domestic

purposes, watering stock, and irrigation by way of a garden truck. The use of water by causing it to spread over wild hay or grass for the purpose of a pasture was held to be for a beneficial use. Pyke v. Burnside, 8 Idaho 487, 69 Pac. 477 (1902). In this regard, the question of whether a beneficial use was found, appeared to depend upon whether the water applied to the land did produce a greater abundance of the natural grasses which was consumed without a material waste of the water. In Re Robinson, 61 Idaho 462, 103 P. 2d 693 (1940). The court in the case of Schodde v. Twin Falls Land & Water Co., 161 Fed. 43 (9th Cir. 1908), affirmed 224 U.S. 107 (1912), held that an appropriator of water from a stream could not incorporate as a part of his appropriation the current of the stream which caused water wheels to lift the water from the stream to his ditch. In the case of Blaine County Investment Co. v. Mays, 49 Idaho 766, 291 Pac. 1055 (1930), the Idaho Supreme Court held that the formation of an ice cap, several feet thick, for the purpose of conserving the water for later use, was not a beneficial use.

Loss of a Water Right

There are four principal ways in which an appropriated right can be lost: abandonment, statutory forfeiture, adverse possession, and estoppel.

Abandonment of the water right will not be presumed and must be clearly established by the evidence. Hall v. Blackman, 8 Idaho 272, 68 Pac. 19 (1902); Perry v. Reynolds, 63 Idaho 457, 122 P. 2d 508 (1942). An abandonment requires an intent to abandon coupled with conduct which supports the intent.

Statutory forfeiture of a water right occurs when there has been a failure for a term of 5 years to apply the water to beneficial use. However, if the appropriator can show good and sufficient reasons for nonapplication to beneficial use, the State Reclamation Engineer is empowered to authorize an extension of time for forfeiture of title for nonuse for an additional period of 5 years. A forfeiture of a water right must be clearly proven. Ada County Farmers' Irrigation Co. v. Farmers' Canal Co., 5 Idaho 793, 51 Pac. 990 (1898); Graham v. Leek, 65 Idaho 279, 144 P. 2d 475 (1943); Hurst v. Idaho Iowa Lateral & Reservoir Co., 42 Idaho 436, 246 Pac. 23 (1946); Application of Boyer, 73 Idaho 152, 248 P. 2d 540 (1952). Both decreed as well as undecreed rights initiated under the permit system are subject to forfeiture. Albrethsen v. Wood River Land Co., 40 Idaho 49, 231 Pac. 418 (1924); Graham v. Leek, supra.

One who claims to have acquired a prescriptive title to a water right must have made a use that was open and notorious, adverse and hostile to the continuous and uninterrupted for the prescriptive,

and under a claim of right. Hall v. Blackman, 8 Idaho 272, 68 Pac. 19 (1902).

One may lose a water right through estoppel by the knowing acquiescence of another's use and enjoyment of that right. Hillcrest Irrigation District v. Nampa & Meridian Irrigation District, 57 Idaho 403, 66 P. 2d 115 (1937).

Preferences in the Use of Water

Article 15, Section 3 of the Idaho Constitution provides in pertinent part as follows:

"Priority of appropriation shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have the preference over those claiming for any other purpose; and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. And in any organized mining district those using the water for mining purposes or milling purposes connected with mining, shall have preference over those using the same for manufacturing or agricultural purposes. But the usage by such subsequent appropriator shall be subject to such provisions of law regulating the taking of private property for public and private use, as referred to in section 14, article 1 of this Constitution."

Article 1, Section 14 of the Idaho Constitution declares that the necessary use of lands for the construction of reservoirs, canals, ditches, or other means of conveyance of water to the place of use or for the drainage of lands are public uses and that private property may be taken for those uses after just compensation. Article 1, Section 14 effectively grants any individual with the authority to appropriate water, the right of eminent domain, for the purpose of obtaining land for the conveyance of water to its place of use.

The Idaho Supreme Court has held that the constitutional preference in favor of certain uses of water over other uses, does not grant those having a preference to take the water of others without making compensation for that taking. The Idaho Supreme Court in the case of Montpelier Mill Co. v. Montpelier, 19 Idaho 212, 113 Pac. 741 (1911) made the following notation:

"It clearly was the intention of the framers of the Constitution to provide that water previously appropriated for manufacturing purposes may be taken and appropriated for domestic use, upon due and fair compensation therefor. It certainly could not have been the intention of the framers of the Constitution to provide that water appropriated for manufacturing purposes could thereafter arbitrarily and without compensation be appropriated for domestic purposes****.

"It is clear, therefore, that under the provisions of the above-quoted section of the constitution, a municipality cannot take water for domestic purposes which has been previously appropriated for other beneficial uses without fully compensating the owner****."

There is no authority by statute or under the Idaho Constitution whereby any individual or association, because of either the use to which it applies the water or the character of its organization, is given any preference to the use of water over another except upon full compensation for the taking of that use.

A preference to the use of water may indirectly be found in an established water district under Idaho Code, Section 42-604 which authorizes the State Reclamation Engineer to designate water districts on streams where there exists a court decree adjudicating water rights. The district either elects a watermaster or the State Reclamation Engineer appoints one if none is elected. The watermaster has the responsibility of distributing the water within the district. Idaho Code, Section 42-607 (Supp. 1969), indirectly provides a preference in the use of water by authorizing the watermaster to deliver, in times of scarcity, to those having adjudicated and licensed rights according to their priority. Where a user has an unadjudicated or unlicensed right, even though that right would have a priority date ahead of either an adjudicated or a licensed right, that right would, for the purpose of distribution during a shortage, be held to have a right subsequent to the adjudicated or licensed right. The watermaster would then deliver the adjudicated and licensed rights in preference to the unadjudicated and unlicensed rights. Idaho Code, Section 42-607 (Supp. 1969); Bigwood Canal Co. v. Chapman, 45 Idaho 380 263 Pac. 45 (1927).

Reservation for Future Uses

There is no statutory or constitutional provision authorizing any individual or association to reserve from appropriation any of the waters of the state, except under Idaho Code, Sections 67-4301 to 4306 (1947), wherein the waters of certain lakes were reserved for the future use of the inhabitants of the state. However, under these statutes, a present appropriation was claimed based upon an existing recreational use.

The Idaho Supreme Court in the case of Beus v. Soda Springs, 62 Idaho 1, 107 P. 2d 151 (1940), after concluding that a municipality had the authority under a specific statute to supply water to persons outside its corporate limits, held that it was not required to continue the use in order to prevent a claim of abandonment. This case authorizes a municipality to appropriate water for its future needs; however, it does not appear to support a position that water could be reserved from appropriation without making or purchasing an existing appropriation.

The constitutional provision appearing in Article 15, Section 3, which prevents the denial of the right to appropriate the unappropriated waters, would appear to prevent the reservation of water for future uses where no present appropriation was perfected. This argument has never been given full consideration by the Idaho Supreme Court. See State Water Conservation Bd. v. Enking, 56 Idaho 722, 58 P. 2d 779 (1936).

Who May Appropriate Water

Idaho Code, Section 42-202 provides that a person, association or corporation can make an application to appropriate the public waters of the state. The Idaho Supreme Court, as near as can be ascertained, has not placed any limitation upon the personal characteristics or qualifications of appropriators, under either the statutory or the so-called constitutional method, except where the state, itself, seeks to appropriate the water. State Water Conservation Board v. Enking, 56 Idaho 722, 58 P. 2d 779 (1936). The Idaho Supreme Court in the Enking decision held that the authority in the State Water Conservation Board to appropriate the public waters of the state effectively authorized the state to withdraw from private appropriation the unappropriated waters and, hence, fell in conflict with Article 15, Section 3 of the Idaho Constitution which prevents the denial of the right to appropriate the unappropriated waters. The court stated as follows:

"If the Board is merely an arm of the state performing 'governmental functions,' it cannot, in face of these constitutional provisions be authorized to withdraw from private appropriation any unappropriated waters of the state. In other words, the state cannot by legislative act authorize its own agency to monopolize or withdraw the very right that Sec. 3 of Article 15 of the Constitution says: 'shall never be denied' the people of the state. (State v. Twin Falls, etc. Water Company, 30 Idaho 41, 67, 166 Pac. 220).

"The people of Idaho in adopting the Constitution thought it a matter of primary importance that they insert in the

fundamental law of the state an express prohibition against the legislature ever, by any kind of legislation, taking away from the humblest settler the right 'to divert and appropriate' and of 'the unappropriated waters of any natural stream to beneficial users' (Sec. 3, Art. 15, Const.) (Emphasis ours)

"The legislature cannot circumvent or thwart that purpose by creating either a state agency or a special corporation and vesting it with the power to appropriate and sell the unappropriated waters of the state (Sec. 15 of the Act) or condemn waters already appropriated (Sec. 4)." (Emphasis ours)

In 1964, an amendment to the Idaho Constitution was approved by the people which authorized the establishment of a state agency with the authority to perfect appropriations. Idaho Constitution, Art. 15, Sec. 7. That section provides as follows:

"There shall be constituted a Water Resource Agency, composed as the Legislature may now or hereafter prescribe, which shall have power to formulate and implement a state water plan for optimum development of water resources in the public interest; to construct and operate water projects; to issue bonds, without state obligation, to be repaid from revenues of projects; to generate and wholesale hydroelectric power at the site of production; to appropriate public waters trustee for Agency projects; to acquire, transfer, and encumber title to real property for water projects and to have control and administrative authority over state lands required for water projects; all under such laws as may be prescribed by the Legislature."

The Legislature in 1965 created the Idaho Water Resource Board with the authority provided in the above amendment.

Appropriation for Sale

The State Constitution specifically recognizes the right to appropriate water for sale to others. Idaho Constitution, Article 15, Secs. 1, 2, 4, 5, and 6. A water service organization as well as an individual may appropriate water for sale. Among the water service organizations which are authorized to appropriate water by statute, are the following: irrigation districts, Idaho Code, Sec. 43-409 (1947); the Idaho Water Resource Board, Idaho Constitution, Art. 15, Sec. 7, Idaho Code, Sec. 42-1734 (Supp. 1967); canal companies, Title 30, Idaho Code; counties, Idaho Code, Sec. 42-2902 (1947); flood control districts, Idaho Code, Sec. 42-3102 (Supp. 1967);

water and sewer districts, Idaho Code, Sec. 42-3212 (Supp. 1967); Chapter 32, Idaho Code; municipalities, Idaho Code, Section 50-323 (1967).

A water service enterprise is considered as the appropriator of water. Farmers' Co-operative Ditch Co. v. Riverside Irrigation District, 14 Idaho 450, 94 Pac. 761 (1908); Wilterding v. Green, 4 Idaho 773, 45 Pac. 134 (1896); Nampa & Meridian Irrigation District v. Barclay, 56 Idaho 13, 47 P. 2d 916 (1935); Harsin v. Pioneer Irrigation District, 45 Idaho 369, 263 Pac. 988 (1927).

A company or an individual who appropriates water for the purpose of sale to others creates in the ones it delivers the water to a valuable right which is entitled to protection as a property right. The right to the use of such water once sold to an individual becomes a perpetual right subject to defeat only by failure to pay annual water rents and to comply with the lawful requirements as to the conditions of the use. Idaho Constitution, Article 15, Section 1; Farmers' Co-operative Ditch Co. v. Riverside Irrigation District, 14 Idaho 450, 94 Pac. 761 (1908).

Administrative Structure

At least nine state agencies have responsibilities of a major or incidental nature regarding the water and related land resources of Idaho. These agencies are listed below with a brief discussion of their specific duties, authority, aims, and organizational structures.

Bureau of Mines and Geology (Title 47, Chapter 2, Idaho Code)

Authority The Bureau of Mines and Geology was created by an act of the legislature in 1919. It has the duty of conducting investigations and studies and to prepare bulletins, maps and reports on hydrographic surveys and other geological work decided by the Board of Control to be advantageous to the development of the mineral and water resources of the state. The Bureau exercises no authority or control over the state's water and related land resources.

Organization Policy matters for the Bureau are established by the Board of Control which meets once each year. The Board of Control consists of: (1) the Governor as Ex-Officio Chairman; (2) Dean of the College of Mines, University of Idaho, as Director of the Bureau and Secretary of the Board; (3) Inspector of Mines; (4) President of the Idaho Mining Association; and (5) the head of

either the Department of Geology or the Department of Mining and Metallurgy of the University of Idaho. The Bureau is a small organization and operates administratively at two levels with each staff member reporting directly to the Director.

Programs and Activities Among the Bureau employees are two staff people both of whom are hydrogeologists, who are working part time on water-related problems. Its activities are confined to research and resource inventory studies. This includes serving in an advisory capacity to other state agencies, municipalities, etc., on water problems when requested.

Fish and Game Department (Title 36, Idaho Code)

Authority The Department has rather broad authority for regulation of the state's fish and wildlife resources. With respect to water, Title 36, Chapters 9 and 11, generally provide authority to require construction of fishways and screens to protect fish. The Department may also take action to prevent the discharge of substances which would be injurious to fish and the streams of the state.

Organization Policy direction of the Department is provided by the Fish and Game Commission consisting of five members appointed by and serving at the pleasure of the Governor. Administrative supervision of the Department is by the Director appointed by the Commission. The Director has authority to hire and appoint all necessary officers and employees to carry out the provision of the Fish and Game laws. The Department currently has the following employees engaged in water-related activities: (1) Conservation Enforcement - 74; (2) Fisheries - 65; (3) Game - 38; (4) Construction - 18; and, (5) Information and Education - 8.

Programs and Activities It is the goal of the Commission and the Department to manage, insofar as is possible, the state's water resources for the maximum sustained production and use of fish and wildlife resources.

Board of Health (Title 39, Idaho Code)

Authority The State Board of Health has general authority and responsibility for the public and mental health of the people of Idaho. Its authority concerning water and related land resources

is outlined in Section 39-101 (4), Idaho Code. The Board has authority to establish and enforce minimum sanitary standards for public water supplies and sewage treatment and waste discharge onto the land or into the surface of ground waters of the state.

Organization The Board of Health consists of five members appointed by and serving at the pleasure of the Governor and confirmed by the Senate. One member must be a licensed physician and not more than one must be an attorney. Administration of the programs and activities of the Board is through an Administrator of Health who is appointed by the Board. The activities of the Board related to water and land resources are carried out primarily through the Engineering and Sanitation Division. Approximately 30 persons are currently employed on programs directly related to water supply, sanitation, pollution control, and waste treatment and disposal.

Programs and Activities The Board is actively engaged in programs to accomplish its major objectives concerning the waters of Idaho. These objectives are (1) to establish and enforce water quality standards on all waters in the state; and (2) to preserve and enhance water quality in order that all such waters will meet the requirements for all indicated beneficial uses. The Board is also involved in a surveillance program for the purpose of upgrading public water supplies.

Department of Highways (Title 49, Idaho Code)

Authority The Department of Highways administers the Idaho highway system. It has no specific powers over water or related land resources, however, under the direction of the Board of Directors, the Department recognizes its responsibilities for the implementation of sound engineering and conservation practices in the water-related activities of the state highway program.

Organization Policy direction of the Department rests with the Board of Highway Directors consisting of three members appointed by the Governor to 6-year terms. The Board appoints a State Highway Engineer, who must be a licensed professional engineer with specific experience in highway engineering. The Department has not assigned personnel specifically to water-related activity although approximately 200 employees periodically are involved in the course of their assignments.

Programs and Activities Responsibility for both roadway and structural design entails considerable effort in the area of drainage area analysis and culvert design; hydraulic design related to channels and conduits; ground-water studies related to earth work stability; and a special cooperative effort with the U.S.D.I. Geological Survey for gauging flows at approximately 110 stations adjacent to Idaho's State Highway System.

Department of Law Enforcement (Title 39, Chapters 24 & 25, Idaho Code)

Authority The Department of Law Enforcement is responsible for regulation of the use of the waterways of the state. Its authority extends to the licensing of watercraft and enforcement of safety provisions of the law. It also has certain authority for construction of public facilities used for water-related recreation purposes.

Organization The Department is directed by a Commissioner appointed by the Governor. Responsibility for waterways activities is administered through the Waterways Section of the Motor Vehicle Division. The Department works through County Chairman of waterways committees which consider and request action of the Department.

Programs and Activities The Department has the responsibility for the protection and promotion of safety, waterways improvement, creation and improvement of parking areas for boating, making and improving boat ramps and moorings, marking of waterways, search and rescue, and all things incident to such purposes including the purchase of real and personal property.

Department of Parks (Title 67, Chapter 2, Idaho Code)

Authority The Department of Parks was created by an act of the legislature in 1965. It has the authority to formulate and put into execution a long range, comprehensive plan for the acquisition, planning, protection, operation, maintenance, development, and wise use of areas of scenic beauty, recreational utility, historic, archeological, or scientific interest.

Organization The Department is governed by the Park Board consisting of six members appointed by the Governor to staggered terms of 6 years each. The Board is authorized to appoint a Director who is its administrative officer and secretary. The

Department employs 64 people who are directly involved in water-related activities. Of the 24 existing state parks, water-based activities take place in 19.

Programs and Activities The Department has prepared a statewide outdoor recreation plan. More specifically the objectives of the plan are as follows: (1) to preserve and protect water areas of unique or exceptional scenic value, not only for the present generation, but for generations to come; (2) to provide opportunities for recreational use of water areas and for outdoor recreation in water area surroundings; (3) to portray and explain plant and animal life associated with water and explain geology and hydrology as a part of a park interpretation program; (4) to promote the wise use and conservation of Idaho's water resources, including pollution control and water fluctuation control; and, (5) to cooperate with all water resource management agencies within the state for effective management and development of Idaho's recreational water resources.

State Board of Land Commissioners (Department of Public Lands)
(Title 47, Chapter 13, & Title 58, Chapter 1, Idaho Code)

Authority The State Board of Land Commissioners has authority to exercise general direction, control, and disposition of the public lands of the state and to protect its lands, streams, and water courses from destruction by dredge mining, and to preserve the same for the enjoyment, use, and benefit of all the people.

Organization The Board is a constitutional agency consisting of the Governor, Secretary of State, Attorney General, State Auditor, and Superintendent of Public Instruction (Section 7, Article 9, Idaho Constitution). The Board exercises its constitutional functions through the Department of Public Lands, which is headed by the State Land Commissioner who is appointed by the Board. The Commissioner is authorized to employ other departmental personnel. The Department currently has one of its employees engaged in water-related activities, specifically those related to the use of the beds of navigable lakes, rivers, and streams.

Programs and Activities The Department's program is related to its responsibility to administer the public lands of the state, including the beds of navigable lakes, streams, and rivers. The Department staff is actively engaged in supervision of forestry operations, mining, grazing, and other state uses of state land and

review of applications for dredge mining and other uses of the lands in the beds of navigable streams below the natural or ordinary high water mark to provide for their commercial, navigable, recreational, or other public use.

Idaho Water Resource Board (Article 15, Section 17, Idaho Constitution & Sections 42-1731 thru 42-1744, Idaho Code)

Authority The Idaho Water Resource Board was created by the legislature in 1965 following approval by the voters of a constitutional amendment in 1964. The Board has broad authority for the formulation and implementation of a state water plan. To accomplish this goal it has specific authority: (1) to study availability of unappropriated water, effective use of existing supplies, conservation storage, distribution, and use; (2) to construct and operate water projects; (3) to generate and wholesale hydroelectric power; (4) to issue revenue bonds and contact indebtedness; (5) to appropriate public waters and trust for Board projects; (6) to acquire and control state lands; (7) to protect Idaho's water from diversion out of state; (8) to institute judicial proceedings to have water rights established by court decree; (9) to subpoena witnesses and records; (10) to require compact commissions to report to the Board on matters pertaining to the Board's authority; and, (11) to recommend to the State Reclamation Engineer action on all applications for permits for future filings involving the impoundment of water in a reservoir with an active storage capacity in excess of 10,000 acre-feet.

Organization The Board consists of eight members appointed by the Governor to staggered 4-year terms with the State Reclamation Engineer as a nonvoting Ex-Officio member. The Board appoints a Director as its administrative officer and director of the Board staff. Since the Board is a relatively new agency, it is not yet completely staffed, but is proposed to employ about 21 persons all of whom will be involved directly in water-related activities.

Program and Activities The Board has commenced studies needed to formulate a state water plan. Basin investigations are conducted by the staff or through cooperative arrangements with various state and Federal agencies. The Board has also contracted for studies of water resources inventory, municipal and industrial water needs, agricultural water needs, county land classification and soil surveys, recreation water needs, and minimum stream-flow for aquatic life. The Board has assumed an active role in reviewing and commenting upon legislation pending in the Congress and other matters affecting water resource project proposals by private,

state, or Federal entities. Liaison is provided with many water planning or administrative organizations such as the Pacific Northwest River Basins Commission, Western States Water Council, and Bear River Compact Commission. The Board is actively seeking ways of participating in the construction of water projects to realize the maximum returns to the state.

State Reclamation Engineer (Department of Reclamation)
(Chapter 17, Title 42, Idaho Code)

Authority The office of State Reclamation Engineer was first established in 1895. Several changes have been made to his duties and the organization of his office. The most recent of these was in 1943 when the present title was approved and he was made successor to the former Commissioner of Reclamation and the Department of Reclamation. The State Reclamation Engineer is responsible for the gathering of basic data on the water resources of the state and the administration of the rights to the use of the water of the state. To accomplish these duties he has authority (1) to make water resource investigations of the surface and ground-water resources of the state; (2) to cooperate with other agencies in making water resource investigations; (3) to make investigations and become familiar with the water uses and needs of the state and the location of potential watershed improvement and water resource development projects; (4) to administer the permit and license procedure for establishing water rights; (5) to supervise the distribution of water to those having rights thereto; (6) to represent the state in all matters pertaining to interstate and international rights affecting Idaho water resources; (7) to supervise the licensing of water well drillers and adopt and enforce minimum well construction standards to prevent waste and contamination of the ground-water resource; (8) to recommend the organization of irrigation and flood control districts and appoint flood control commissioners; (9) to assist the courts in adjudication of water rights; (10) to approve plans for dam construction and inspect dams during and following construction to assure compliance therewith.

Organization The State Reclamation Engineer is appointed by the Governor to a 6-year term. The law requires that he be a licensed professional civil or hydraulic engineer with experience in water matters. The Engineer is empowered to appoint a deputy and to hire other employees. The presently approved staffing is 43 employees, all of whom are engaged in water-related duties. In addition, the Engineer assists and supervises the work of approximately 80 watermasters who are locally selected and salaried.

Programs and Activities The Engineer's office is actively involved in administration of the use of the waters of the state. Applications for appropriation of water, for amendments and transfers of existing water rights, claims of rights established by diversion and application to beneficial use, and other matters are processed. Where required, hearings and conferences are held to resolve issues. Personnel assist watermasters throughout the state in their duties. The Engineer cooperates financially in stream gaging, ground-water monitoring, water quality studies and area hydrology investigation with the U.S.D.I. Geological Survey, and in watershed and special studies with other state and Federal agencies. Personnel conduct short-term reconnaissance water resource investigations of areas of the state for the purpose of determining the need for administrative action or to resolve conflicts. The Engineer serves on several inter-agency boards and interstate commissions. When requested by the courts, the office assists in gathering information and preparing maps necessary for adjudication of water rights.

State Water Policy

A few important statements of water management policy are contained in the constitution and laws of the State of Idaho. These may be briefly stated as follows:

1. The use of water appropriated for sale, rental, or distribution, is declared to be a public use subject to regulation and control of the state. (Article 15, Section 1, Constitution of Idaho)
2. The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit use for power purposes. (Article 15, Section 3, Constitution of Idaho)
3. As between uses, domestic use shall have preference over all other uses; agricultural use shall have preference over manufacturing use, except in organized mining districts where mining use has preference over agricultural and manufacturing use. (Article 15, Section 3, Constitution of Idaho)
4. The industrial prosperity and agricultural development of the state is dependent upon the just apportionment to and economical use by those making a beneficial use of water. (Section 42-101, Idaho Code)

5. All the surface and ground waters of the state are declared to be the property of the state.
(Section 42-101 and 42-226, Idaho Code)
6. The traditional policy of the state requires the water resources to be devoted to beneficial use in reasonable amounts through appropriation.
(Section 42-226, Idaho Code)
7. The welfare of the people of this state is dependent upon conservation, development and optimum use of our water resources. To achieve this objective and protect the waters of Idaho from diversion out of state, it is essential that a coordinated integrated multiple use water resource policy be formulated and a plan developed to activate this policy as rapidly as possible.
(Section 42-1731, Idaho Code)
8. The state policy is to protect its land, streams, and water courses from destruction by dredge mining, and to preserve the same for enjoyment, use, and benefit of all of the people; and, clean water in the streams of Idaho is in the public interest. (Section 47-1312, Idaho Code)

In accordance with these statutory statements of policy, the following broad goals have been established by the legislature:

1. In administration of the rights to the use of the state's water resources, consideration will be given to (1) safeguarding the public interest in resource; (2) protection of the public right to appropriate unappropriated water; (3) recognition of the superiority of uses as between appropriators; (4) the principle of reasonable and economical use shall govern water rights; and, (5) the doctrine of "first in time is first in right" will be the basis of such administration.
2. In adoption of a state water plan, consideration shall be given to (1) maximum economic development of water resources; (2) an adequate water supply for the beneficial uses now or hereafter prescribed by law; and, (3) the prevention of wasteful, impractical, or unreasonable use.

MONTANA WATER LAWS:

A RESUME'



PREPARED BY

MONTANA WATER RESOURCES BOARD

E. V. Darlington, Director

Helena, Montana

MONTANA

The Public Policy Of The State Is To Promote The Conservation, Development, And Beneficial Use Of The State's Water Resources To Secure Maximum Economic And Social Prosperity For Its Citizens

Montana Water Resources Act of 1967.

This resume of Montana Water Laws contains only a summary of the more important laws governing the state's water. For complete detail and accuracy of all laws concerning water, the Revised Codes of Montana 1947 should be consulted.

Basic Water Laws of Montana

Appropriation Doctrine Recognized

The basic water law recognized in Montana is the prior appropriation doctrine. This doctrine is a "time use" doctrine in which the concept of "first in time, first in right" is the principal criteria for determining or recognizing the relative status of alleged water rights. The acceptance and development of the appropriation doctrine rather than the riparian doctrine was due to the climate and the particular type of frontier settlement (mining and ranching) which occurred in Montana, and the fact that most of the land was in public domain.

This doctrine was recognized in the first water-right decision of the Montana Supreme Court in 1896.^{1/} However 3 years later Chief Justice Decius S. Wade championed the older doctrine^{2/} and it was not until 1921 that the court in Mettler v. Ames Realty Co. formally abrogated the riparian doctrine and declared the appropriation doctrine to be the sole surface water law of the state.^{3/}

Ownership

No person owns water in Montana. Rather, the state has ownership of water by virtue of the state constitution^{4/} (which

^{1/} Caruthers v. Pemberton, 1 Mont. 111-117 (1869)

^{2/} Thorp v. Freed, 1 Mont. 651-87 (1872)

^{3/} Mettler v. Ames Realty Co., 61 Mont. 152-171, 201 Pac. 702-708 (1921)

^{4/} Montana Constitution, Article III, Sec. 15.

holds that the use of water is a public use) and by the opinion of the Montana Supreme Court.^{1/} An individual has (owns) the right to use the water as long as he does not infringe on rights of prior appropriators.

Acquisition of Water Rights

The principal method of acquiring a water right in Montana is by appropriation. The nature of the appropriation procedure differs for adjudicated and unadjudicated streams.

Appropriation from Adjudicated Streams

The revised Codes of Montana (R.C.M.) 1947, Title 89-829 through 838, spells out the procedure for appropriation of water from adjudicated streams. An appropriator shall:

1. Employ a competent engineer to survey the area and means of conducting water from its source to place of intended use.
2. Have aerial photographs and drawings thereon to show the course of the intended diversion or location of intended impoundment.
3. File with the clerk of the court in the county of appropriation a petition which includes:
 - a. The amount of water sought by appropriation.
 - b. A description of the watercourse or body from which water is intended to be appropriated.
 - c. A description of the means of diversion or size, location, and manner of construction if a reservoir is intended.
 - d. The engineers survey and aerial photographs.
 - e. A declaration by the appropriator that the rights sought shall be subject to and bound by any decree theretofore rendered adjudicating the waters or any body to which the waters may be tributary.
4. Name all others who have or appear to have rights in

^{1/} Galaham v. Lewis, 105 Mont. 294, 300, 72 P.2d 1018 (1937)

the source of supply as defendants in the appropriation proceeding.

When this procedure is completed, a trial follows which normally results in a decree. The court shall in every case, if an appropriation is awarded to the plaintiff, provide that the new appropriation is subject to all adjudicated rights which are prior in time to plaintiff's right, and the plaintiff shall be bound by the terms of any prior decrees with respect to water rights in the proper order of his priority as if he had been a party to the decree originally.^{1/}

Appropriation from Unadjudicated Streams

The appropriation of water from an unadjudicated stream in Montana is similar to the procedure for adjudicated streams but does not require litigation. The procedure requires:^{2/}

1. Posting of notice in a conspicuous place at the point of intended diversion, stating:
 - a. Quantity of water claimed.
 - b. Use for which water is claimed and place of use.
 - c. Description of means of diversion.
 - d. Date of appropriation.
 - e. Name of appropriator.
2. Filing, within 20 days after date of appropriation, of a notice of appropriation with the county clerk, including in addition to the posted notice:
 - a. Name and description of the stream.
 - b. Description of point of diversion with reference to a permanent monument or natural marker, and
 - c. Verification by affidavit of the appropriator that facts of the notice are true.

^{1/} 89-832, RCM, 1947

^{2/} 89-810, RCM, 1947

Size of Water Right

A point often misunderstood concerning water rights is that the amount of water claimed in an appropriation is not necessarily the amount to which the appropriator has a right. The amount of water beneficially used determines the size of the right. In this respect the court has said:

"The rights of appropriators of water may not be measured entirely by what they claimed in their notices of appropriation but must be measured by their beneficial use thereof over reasonable periods;"^{1/}

Loss of Water Right

A water right in Montana may be lost in two ways, abandonment and adverse use. Both are questions of fact and are determined as such.

Abandonment Abandonment of a water right is a voluntary act, and to constitute it there must be a concurrence of act and intent--the relinquishment of possession and the intent not to resume it for a beneficial use--neither alone being sufficient to bring about its abandonment.^{2/}

Adverse Use Adverse use or prescription is the open, notorious, exclusive, adverse, continuous, and uninterrupted use of water by a party other than the party entitled to the water. In order to acquire a water right by adverse use or prescription the proof must show all the following elements: That the use has been continuous for 5 years, exclusive, open, under a claim of right, hostile, and an invasion of another's rights which the latter had an opportunity to prevent.^{3/}

Use of water with permission negates the possibility of adverse use.

The claim of adverse use of a water right cannot be established until the owner of the superior right is deprived of the benefit of its use in such a substantial manner as to notify him that his rights are being invaded; mere use of the water

^{1/} Irion v. Hyde, 107 Mont. 84, at 95, 81 Pac. 2d 353, (1938)

^{2/} Thomas v. Bull, 66 Mont. 161 at 155, 213 Pac. 597. See also Osnes Livestock Co. v. Warren, 103 Mont. 284, at 294, 62 Pac. 2d, 206

^{3/} Op. Cit. Irion v. Hyde

during the statutory period alone is not sufficient, but it must appear that during such entire period an action could have been maintained against the claimant by the owner of the right.^{1/}

Official Measurement of Water

The legal standard for the measurement of water in Montana is the cubic foot per second.^{2/} Since many water rights in the past were granted in miner's inches, the law provides the following conversion or equivalent factors:^{3/}

40 miner's inches = 1 cubic foot per second
100 miner's inches = 2 1/2 cubic feet per second
200 miner's inches = 5 cubic feet per second

Ground-Water Law

Montana's ground-water code is administered by the Montana Water Resources Board. The principal provisions of this code, which have yet to be tested in court, are summarized below and published as Title 89 of the Revised Codes of Montana.

Right to Use (89-2912) The application of ground water to a beneficial use prior to January 1, 1962, is hereby recognized as a water right.

Rights to surface water where the date of appropriation precedes January 1, 1962, shall take priority over all prior or subsequent ground-water rights.

Beneficial use shall be the extent and limit of the appropriative right.

Appropriative rights shall relate only to quantities of water for beneficial uses and not to water levels, means of use, or ease of withdrawal; and appropriative rights shall not apply to minimal household use.

Filing Notices of Appropriation and Completion (89-2913) Notices of ground-water appropriation and completion are to be filed by each appropriator with the county clerk and recorder of

^{1/} Ibid.

^{2/} 89-817, RCM, 1947.

^{3/} 89-818, RCM, 1947.

the county within which the appropriation is to be made on forms provided to the clerk by the Montana Water Resources Board.

Controlled Ground-Water Areas (89-2914) Designation or modification of an area of controlled ground-water use may be proposed to the board by the board's director or by petition signed by at least 20 or one-fourth (whichever is the lesser number) of the users of ground water in a ground-water area wherein there is alleged to be factual data showing that:

1. Withdrawals exceed recharge.
2. Excessive withdrawals are likely to occur in the near future because of consistent and significant increases in withdrawals.
3. Significant disputes regarding priority of rights, amount of water in use by appropriators, or priority of type of use are in progress within the ground-water area.

NOTE: "Ground-water area" is defined in the law (82-2911) as an area which, as nearly as known facts permit, may be designated so as to inclose a single and distinct body of ground water. Subareas may also be created within a larger ground-water area.

Following a proposal for a controlled ground-water area, the board must hold hearings to consider evidence and information and, after the hearings, make written findings and an order as to the proposed controlled area.

Controlled Area Permit (89-2918) A permit from the Montana Water Resources Board is required in order to appropriate ground water from a controlled area.

Water Districts

Montana law provides for five principal types of "districts" that may be established for the general purpose of studying, planning, and promoting the development and conservation of water and related land resources and providing flood control. These are (1) County water and sewer districts, (2) Drainage districts, (3) Irrigation districts, (4) State soil and water conservation districts, and (5) County and municipal flood control and conservation districts.

In addition to district organizations there are two "corporate" types of organizations which may be formed for water development in Montana. These are Water Users' Associations and Canal or Ditch Companies. Most irrigation development in Montana has been accomplished through these private types of development including individual efforts and irrigation districts. The Montana Water Resources Board develops and markets water through the Water Users' Association.

Finally, there has been considerable irrigation and water development in Montana by the U.S.D.I., Bureau of Reclamation, and the Soil Conservation Service, U.S.D.A.

County Water and Sewer Districts

County water districts in Montana may be formed by any combination of counties or cities or portions of those political divisions, including unincorporated territory, having not less than 200 inhabitants. Petitions to form a county water district must be signed by 10 percent of the registered voters in the proposed district. Any district incorporated has the power to acquire, operate, and maintain water rights, water and sewerworks, and other rights useful or necessary for the storage, conservation, supply, and conveyance of water useful for purposes beneficial to the district. Incorporated districts may accept assistance from public and private sources, borrow money, incur bonded indebtedness, and levy taxes.

Drainage Districts

Drainage districts in Montana are formed for particular projects. Once created, they may be expanded. Drainage districts are under the jurisdiction of the judge of the district court who may create the drainage district and appoint the commissioners. Drainage districts may be created to (1) construct drains, ditches, levees, across the lands of others, or to straighten, or otherwise alter any natural stream or watercourse not navigable, for the promotion of public health or welfare or (2) maintain and keep in repair such works previously constructed. Drainage districts have the power of taxation and they may assess lands that are benefited from the district projects.

Irrigation Districts

Irrigation districts in Montana may be formed to cooperate with the United States under Federal reclamation laws for the purposes of constructing irrigation works (including drainage)

and purchasing, extending, and maintaining constructed works. Sixty percent of the landholders whose land is susceptible to irrigation from the district and whose title or evidence of title constitutes 60 percent of said land must petition for a district to the district court. A copy of the petition and all other associated maps and papers filed must also be filed with the Montana Water Resources Board. At the time of filing in the district court, the board must present reports on (1) engineering features involved, (2) possibilities for water supplies, and (3) a copy of the decree of the district court showing any adjudicated water rights involved.

State Soil and Water Conservation Districts

Any 10 occupiers of land lying within the limits of the area proposed to become a district may petition the State Soil Conservation Committee to form a district. A soil and water conservation district is a body corporate and politic governed by five supervisors appropriately elected if there are no incorporated municipalities within the district. In all cases where the boundaries of such soil and water conservation district include any incorporated municipality or municipalities, said board of supervisors, in addition to said five elected supervisors shall consist of two appointed supervisors, making a total of seven supervisors in such districts. The districts are coordinated through the State Soil Conservation Committee.

Examples of the activities and reasons why these districts are formed are (1) to develop comprehensive district plans for soil and water conservation; (2) flood control; (3) to undertake demonstration projects; (4) to construct, improve, and operate structures as may be necessary for authorized operations; and (5) to conduct research on soil erosion, floods, and sedimentation.

County and Municipal Flood Control and Conservation Districts

Montana law (Ch. 33 of Title 89)^{1/} provides that cities, towns, or counties through their governing bodies may individually or jointly engage or participate in the establishment of water conservation and flood control projects, among themselves or with the State or Federal Government. A wide variety of purposes may be objectives of such projects including but not limited to flood control, municipal and industrial water supplies, irrigation, recreation and wildlife, domestic use, drainage, and streamflow stabilization, and pollution abatement. The law explicitly contemplates that the State or Federal Government may assume the actual direction and doing of the work on these projects.

^{1/} 89-3301-3313, RCM, 1947

Weather Modification

Attempts to change or control weather by artificial methods in Montana are regulated by the Montana Water Resources Board. Basic elements of the weather modification program as stipulated in Montana are as follows:

1. License and Permit Required:

No one may engage in weather modification activity in Montana except under and in accordance with a license and permit issued by the Water Resources Board.

2. Exemption from Fee Requirement:

The Board may provide by rule to exempt from license and permit fees weather modification activity of certain types and under certain conditions including:

- a. State and Federal research, including colleges and universities
- b. Emergency operations against fire, frost, sleet, or fog.

3. Licensee Qualifications:

The Board may, by rule, set the procedure and conditions for issuing a license to an applicant. However, applicants must demonstrate competence in the field of meteorology to the satisfaction of the Board. If the applicant is an organization, the requirements must be met by the individual in charge of the operation.

4. Terms of License and Fee:

- a. A weather modification license expires at the end of the calendar year of its issue.
- b. A fee of one hundred dollars shall be charged for a weather modification license.

5. Requirements for Permits:

Permits shall be issued in accordance with procedures and subject to conditions the Board may establish only:

- a. If the applicant is licensed pursuant to this act
- b. If sufficient notice of intention and proof of publication is filed

- c. If applicant furnishes proof of financial responsibility in an amount determined by the Board.
 - d. If the permit is paid.
 - e. If the Board has determined that the weather modification activity is for the general welfare and public good.
 - f. If the Board has held an open public hearing in the area to be affected as to such issuance.
6. Separate Permit for Each Operation:
- A separate permit is required for each weather modification operation. An operation is defined as the activity producing or attempting to produce a certain modifying effect within one geographical area over one continuing time interval not exceeding one year.
7. The fee for a weather modification permit shall be one and one-half percent of the estimated cost of the operation.

Compacts and Treaties

Waterways Treaty - 1909

According to the Waterways Treaty, signed in 1909, by the United States and Great Britain, the waters of the St. Mary and Milk Rivers are to be divided equally between the United States (Montana) and Canada. In making such equal apportionment, however, more than half of the water may be taken from one river and less than half from the other by either country so as to afford a more beneficial use of each. During the irrigation season, the United States is entitled to a prior appropriation of three-fourths of the natural flow of the Milk River and Canada is entitled to three-fourths of the natural flow of the St. Mary River. The principal international tributaries affecting Montana are Sage Creek (North of Havre), Lodge and Battle Creeks (North of Chinook), and Frenchman Creek (North of Saco).

Yellowstone Compact - 1950

The states of Montana, North Dakota, and Wyoming are members of the Yellowstone River Compact, ratified in December 1950.

This compact provides the means for the allocation and appropriation of water from the Yellowstone River System. The principal terms and provisions of the compact are specified as follows:

1. The compact is administered by a commission consisting of one representative from Montana, Wyoming, and the U.S.D.I. Geological Survey.
2. The area of the Yellowstone Basin within Yellowstone National Park is exempt from the provisions of the Compact.
3. Water rights on the Yellowstone River and its tributaries which were perfected prior to 1950 are considered vested and are not subject to the terms of the compact.
4. No water shall be diverted outside the Yellowstone Basin without unanimous consent of the signatory states.
5. Concerning Montana and Wyoming, the unused and unappropriated waters as of January 1, 1950, in the major interstate Yellowstone River tributaries are to be apportioned as follows:

Clarks Fork of the Yellowstone

To Wyoming.60%
To Montana.40%

Big Horn River (excluding the Little Big Horn)

To Wyoming.80%
To Montana.20%

Tongue River

To Wyoming.40%
To Montana.60%

Powder River (including the Little Powder River)

To Wyoming.42%
To Montana.58%

The Columbia River Treaty of 1961 and the Protocol of January 1964

Salient features of the treaty can be briefly summarized as follows:

1. Canada to provide 15,500,000 acre-feet of storage by constructing dams at Mica Creek, Lower Arrow Lake, and Duncan Lake.
2. Canada to operate the amounts of storage for flood control purposes in accordance with principles set forth in the treaty, for a period of 60 years. Canada to be paid \$64 million in U.S. funds by the United States for flood control benefits on commencement of respective storage operations.
3. Canada to operate the amounts of storage in accordance with assured plans of operation designed to produce downstream power benefits in the United States.
4. Canada to be entitled to one-half of the downstream power benefits, that is, additional power generated in the United States as a result of river regulation by upstream storage in Canada. Portions of the Canadian entitlement may be sold in the United States.
5. The United States to have the option of commencing construction of Libby storage dam.
6. Canada to have the option of making various diversions of the Kootenai River during the life of the treaty.

The protocol which was agreed to amplified and clarified the Columbia Treaty. A number of improvements were effected among which the following may be listed.

1. Reaffirmation in positive terms of Canada's right to make any diversions of Columbia Basin water required for consumptive needs such as irrigation and municipal uses.
2. Clarification of Canada's right to continue in perpetuity any diversion of Kootenai River water undertaken in accordance with the treaty.
3. Confirmation of Canadian control over detailed operation of the Canadian Treaty storage for power purposes.
4. A clear statement that the treaty does not establish any precedents that apply to any waters other than those of the Columbia River and does not modify the application of the Boundary Waters Treaty to such other waters.

Water Pollution

Under the supervision of the State Water Pollution Control Council, the State Department of Health is responsible for administering the water pollution laws of the state. The Department of Health has supervision over all state waters which are directly or indirectly being used as a public water supply. However, it is the Water Pollution Control Council which is responsible for establishing and modifying the classification of water in accordance with present and future beneficial uses. The Council is also responsible for formulating a program for pollution abatement.

LEGAL AND ADMINISTRATIVE BACKGROUND
STATE OF NEVADA



PREPARED BY
DIVISION OF WATER RESOURCES
Roland D. Westergard
State Engineer

NEVADA

State Water LawHistorical

A major portion of the area that is now the State of Nevada was included in the Territory of Utah, established on September 9, 1850, and the use of water had been subject to the laws of this territory. The Territory of Nevada was created on March 21, 1861, and for several years after the organization of the territory there were no statutes concerning water rights. Nevada was admitted to the Union as a State by proclamation of President Lincoln on October 31, 1864.

The Constitution of the State of Nevada does not contain any specific provision relating to water resources. The Constitution contained a general eminent domain clause which was construed to provide some relief in claims of water rights by due process and by condemnation for irrigation ditch right of way. During the period when Nevada was a territory and for many years after Nevada became a state, the right to the use of water was generally established under the common law doctrine of riparian rights.

State Water Policy

The water policy and philosophy of the State of Nevada has been developed by over one hundred years of usage beginning about 1849 for irrigation and mining, and is now contained in the Nevada Water Law, Nevada Revised Statutes of 1957, as amended. The fundamental right to use of water in Nevada was completely changed in 1885 by a Nevada Supreme Court decision reversing its stand with respect to the riparian right doctrine and has since applied the doctrine of prior appropriation. The court concluded that the riparian doctrine did not serve the wants and necessities of the people for either mining or agriculture.

The State water policy, procedure for acquiring a right to use water by adjudication and by appropriation, the administration for the conservation, regulation, and distribution of the public waters of the state above and below the ground are provided by statute in the Nevada Water Law under Chapters 533 through 544, inclusive, Nevada Revised Statutes of 1957, as amended.

Statutes relating to water were enacted by the Nevada Legislature as early as 1866. Court decisions were the guidelines for the legislature to enact statutes to attempt to bring some

order out of the chaos created by early mining booms and irrigation development in the semiarid State of Nevada.

The basic concept of the present Nevada Water Law was developed from the act of 1903 approved in February 16, 1903, which declared all natural water courses and natural lakes, and the waters thereof belong to the public and are subject to appropriation for a beneficial use, and the right to the use of water so appropriated for irrigation shall be appurtenant to the land to be irrigated, and beneficial use shall be the basis, the measure, and the limit of the right. The philosophy of the act of 1903 was amended and further expanded by major legislation in the acts of 1905, 1913, and 1939. The 1913 legislation provided a law for the conservation of underground waters and declared all sources of water supply within the boundaries of the state whether above or beneath the surface of the ground belong to the public. The act of 1939, approved March 25, 1939, provided the first specific legislation for the regulation of underground waters as distinguished from all previous legislation relating to surface waters.

It is interesting to note that an act of 1879 to encourage sinking of artesian wells provided a bounty of \$2.00 per foot after the first 500 feet if the well flowed beneficially. An act of 1887 provided a bounty of \$1.25 per foot for sinking an artesian well if the well furnished 7,000 gallons of water every 24 hours flowing continuously for 30 days.

The important provisions of the present Nevada Water Law under the Nevada Revised Statutes of 1957, as amended are briefly summarized.

Acquisition of a Water Right

General Nevada Revised Statutes, Chapter 533, Sections .010 through .850, inclusive, express generally the basic concept and philosophy of the present Nevada Water Law. Sections .090 through .320, inclusive, provide the authority for the adjudication of claims of vested water rights which were initiated and used beneficially prior to legislation. Sections .325 through .435, inclusive, are the statutory procedure for appropriating the public waters and perfecting a water right.

Adjudication NRS 533.090 through 533.320, inclusive, provides the procedure for the adjudication of a claim of a vested water right where the use was initiated prior to legislation. Claims of a vested right on surface water must include evidence of application of water to a beneficial use prior to March 1, 1905.

Claims of a vested right from an underground source must include evidence of application of water to a beneficial use prior to March 22, 1913, for water from an artesian well or definable aquifer and prior to March 25, 1939, for a well from percolating waters.

Adjudication to determine the relative rights to the use of the water on a stream system or within an underground basin may be commenced upon petition to the State Engineer signed by one or more water users. In the absence of a petition the State Engineer is required to enter an order for the determination of the relative rights to the use of the water on any stream system or underground basin selected by him if he finds the facts and conditions to justify an order. The proceeding begins with an examination of water supplies, diversions and irrigated lands, and taking proofs of appropriation filed by all claimants. Based upon these findings, a preliminary order of determination of water rights is made. The State Engineer's final order of determination, made after the hearing of objections, together with evidence taken, is filed in the appropriate district court as the basis of a civil action. Hearings are held by the court upon the exceptions. At the conclusion of the proceeding, the court enters a decree affirming or modifying the order of the State Engineer.

The above sections also provide for water distribution and regulation on adjudicated stream systems with annual budget certified to the board of county commissioners.

Appropriation of Public Waters NRS 533.325 through 533.435, inclusive, provides the complete procedure for appropriation of the public waters of the state whether above or beneath the surface of the ground. Each application for a permit to appropriate water shall contain the following information:

1. The name and post office address of the applicant, and if the applicant is a corporation, the date and place of incorporation.
2. The name of the source from which the appropriation is to be made.
3. The amount of water which is desired to be appropriated, expressed in terms of cubic feet per second, except in an application for a permit to store water, where the amount shall be expressed in acre-feet.
4. The purpose for which the application is to be made.

5. A substantially accurate description of the location of the place at which the water is to be diverted from its source, and, if any of such water is to be returned to the source, a description of the location of the place of return.
6. A description of the proposed works.
7. The estimated cost of such works.
8. The estimated time required to construct the works, and the estimated time required to complete the application of the water to a beneficial use.
9. The signature of the applicant or his properly authorized agent.

A fee of \$25.00 is required by NRS 533.435 to accompany an application to appropriate the public waters. Fifteen dollars of this fee is used to publish the application in the county where the diversion is made for 5 successive weeks. The State Engineer requires a map to accompany an application prepared by a State Water Right Surveyor and showing the point of diversion tied to a government land survey marker and the place of use shown by 40-acre subdivisions. NRS 533.365 provides for a 30-day period after the date of the last publication for filing a protest against the granting of an application. A protest must be received by the State Engineer in duplicate within 30 days after the date of the last publication of the application to appropriate and accompanied by a \$10.00 statutory filing fee.

If the application to appropriate water does not interfere with prior rights at the source and no protests have been received the State Engineer will issue a permit to the applicant. The permit will allow the permittee a limited time to develop the water to a beneficial use with some extension of time for good cause. Certain proofs of due diligence are required and, upon filing an acceptable proof of beneficial use, the permittee will receive a certificate from the State Engineer as evidence of his appropriation and perfecting of the right.

The point of diversion, manner or place of use of an existing water right may be changed upon application to the State Engineer. If there is no interference with existing rights at the source of the proposed change the State Engineer will issue a permit granting a limited time to complete the change and develop the water to a beneficial use. Applications to change must be submitted

on a prescribed form accompanied by a map showing the existing works and the location of the proposed works and with a \$30.00 statutory fee. The application to change is then published for 5 consecutive weeks with a 30-day period after the date of the last publication for filing protests.

Beneficial Use NRS 533.035. Beneficial use shall be the basis, the measure, and the limit of the right to the use of water. Under NRS 533.400 the proof of beneficial use deposition submitted to the State Engineer shall include the following information:

1. The name and post office address of the person making such proof.
2. The number and date of the permit for which proof is made.
3. The source of water supply.
4. The name of the canal or other works by which the water is conducted to the place of use.
5. The name of the original person to whom the permit was issued.
6. The purpose for which the water is used.
7. If for irrigation, the actual number of acres of land upon which the water granted in the permit has been beneficially used, giving the same by 40-acre legal subdivisions when possible.
8. An actual measurement taken by a licensed State Water Right Surveyor or an official or employee of the State Engineer's office of the water diverted for such use.
9. The capacity of the works of diversion.
10. If for power, the dimensions and capacity of the flume, pipe, ditch or other conduit.
11. The average grade and difference in elevation between the termini of such conduit.
12. The number of months, naming them, in which water has been beneficially used.

13. The amount of water beneficially used, taken from actual measurements, together with such other data as the State Engineer may require to acquaint himself with the amount of appropriation for which the proof is filed.

The Proof of Beneficial Use deposition is submitted to the State Engineer with a \$1.00 statutory fee and accompanied by a map on tracing linen prepared by a licensed State Water Right Surveyor. The map must show with substantial accuracy the following:

1. The point of diversion by legal subdivision or by metes and bounds from some corner, when possible, from the source of supply.
2. The traverse of the ditch or other conduit, together with cross-sections of the same.
3. The legal subdivisions of land embraced in the application for the permit and the outline by metes and bounds of the irrigated area with the amount thereof.
4. The average grade and the difference in elevation of the termini of the conduit, and the carrying capacity of the same.
5. The actual quantity of water flowing in the canal or conduit during the time the survey was being made.
6. The map must bear the affidavit of the surveyor or engineer making such survey and map.

After satisfactory proof has been made to the State Engineer that water has been placed to beneficial use under any application to appropriate water or any application to change the point of diversion, manner or place of use, the State Engineer shall issue to the holder of the permit, his assign or assigns a certificate setting forth:

1. The name and post office address of the appropriator, his assign or assigns.
2. The date, source, purpose, and amount of appropriation.
3. If for irrigation, a description of the irrigated lands by legal subdivisions, when possible, to which the water is appurtenant.
4. The number of the permit under which the certificate is issued.

The certificate is then recorded in the county in which the water is diverted from its source at the expense of the owner of record within 30 days after issuance.

Eminent Domain NRS 533.050. The beneficial use of water is hereby declared a public use, and any person may exercise the right of eminent domain to condemn all lands and other property or rights required for the construction, use and maintenance of any works for the lawful diversion, conveyance, and storage of waters.

Prescriptive Rights Prohibited NRS 533.060, Section 3. No prescriptive right to the use of such water or any of the public water appropriated or unappropriated can be acquired by adverse user or adverse possession for any period of time whatsoever, but any such right to appropriate any of such water shall be initiated by first making application to the State Engineer for a permit to appropriate the same as provided in this chapter and not otherwise.

State Water Right Surveyors NRS 533.080 provides for the appointment of State Water Right Surveyors to prepare all maps, surveys, and measurements of water required under the provisions of this chapter. Appointment as a State Water Right Surveyor is made upon application to the State Engineer by any registered engineer or land surveyor, qualified and registered in the State of Nevada. The State of Nevada is not liable for the compensation of any State Water Right Surveyor, but shall be paid by the person employing him.

Assignment of Water Rights NRS 533.385 provides the authority to assign any application to appropriate water or permit issued by the State Engineer to another person only if he is authorized under statute to acquire the same in the first instance. No such assignment is binding, except between the parties thereto, unless filed for record in the office of the State Engineer.

Loss of Water Right Surface waters. NRS 533.060, Section 2 provides that in case the owner or owners of any such ditch, canal, reservoir, or any other means of diverting any of the public water shall fail to use the water therefrom or thereby for beneficial purposes for which the right of use exists during any 5 successive years, the right to so use shall be deemed as having been abandoned, and any such owner or owners shall thereupon forfeit all water rights, easements, and privileges appurtenant thereto theretofore acquired, and all the water so formerly appropriated by such owner or owners and their predecessors in interest may be

again appropriated for beneficial use the same as if such ditch, canal, reservoir or other means of diversion had never been constructed, and any qualified person may appropriate any such water for beneficial use.

Ground Water NRS 534.090, Section 1 provides that failure for 5 successive years on the part of the holder of any right, whether it be an adjudicated right, an unadjudicated right, or permitted right, and further whether such right be initiated after or before March 25, 1939, to use beneficially all or any part of the underground water for the purpose for which such right shall be acquired or claimed, shall work a forfeiture of both undetermined rights and determined rights of the right to the use of such water to the extent of such nonuse. Upon the forfeiture of a right to the use of ground water, such water shall revert to the public and shall be available for further appropriation, subject to existing rights.

NRS 534.090, Section 2 provides that a right to use underground water whether it be vested or otherwise may be lost by abandonment. If the State Engineer, in investigating a ground water source, upon which there has been a prior right, for the purpose of acting upon an application to appropriate water from the same source, is of the belief from his examination that an abandonment has taken place, he shall so state in his ruling approving the application.

Appeals NRS 533.450 provides that any person aggrieved by any order or decision of the State Engineer may have the same reviewed by a proceeding for that purpose initiated in the proper court within 30 days following the rendition of the order or decision.

Ground Water

NRS 534.010 through 534.230, inclusive, provides for the conservation and distribution of underground waters within the boundaries of the State of Nevada. The act of 1939 was approved March 25, 1939, as amended became Chapter 534 under the Nevada Revised Statutes of 1957, and was the first legislation specifically designed for the regulation and administration of underground waters. This chapter authorizes the State Engineer to designate ground-water basins, to establish preferred uses of water within such basins, and to limit withdrawals and to issue temporary permits to appropriate ground water which may be revoked when water can be served by a municipality or water district.

License Well Drillers Chapter 534 further provides for the annual licensing of well drillers upon application to the State Engineer who are also licensed as a well driller by the State Contractor's Board.

Domestic Wells Excepted NRS 534.180 provides that no section under Chapter 534 shall apply in the matter of obtaining permits for the developing and use of underground water from a well for domestic purposes where the draught does not exceed a daily maximum of 1,440 gallons.

Dams and Other Obstructions

NRS 535.010 through 535.120, inclusive, provides for the construction, reconstruction, and alteration of dams upon application and approval of plans and specifications by the State Engineer. Dams and other obstructions may be inspected by the State Engineer with authority to safeguard life and property.

Ditches and Canals

NRS 536.010 through 536.120, inclusive, provides for the regulation and maintenance of ditches, canals, flumes, and other conduits by the State Engineer.

Navigable Bodies of Water

NRS 537.010 through 537.030, inclusive, declared the Nevada portion of the Colorado River, the Virgin River, and Winnemucca Lake navigable and title to lands below the high water mark of both the Colorado River and the Virgin River and title to the bed of Winnemucca Lake to be held by the state.

Interstate Compacts

NRS 538.010 through 538.570, inclusive, provides authority for compacts and commissions of interstate waters.

Columbia River Basin NRS 538.420 - Columbia Basin Interstate Compact Commission. This section provided the authority to create a Nevada Commission to serve on the joint commission of basin states with power to negotiate an agreement or compact of the Columbia River, including the Snake River and its tributaries. The Nevada Legislature under NRS 538.530 ratified and approved the

Columbia Interstate Compact signed on October 3, 1960, by the commissioners representing the states of Idaho, Montana, Oregon, Utah, Nevada, Washington, and Wyoming. This section authorizes the appointment of one commissioner to represent the State of Nevada on the Columbia Compact Commission established under Article III of the compact.

Irrigation Districts

NRS 539.010 through 539.783, inclusive, provides the authority to establish Irrigation Districts within the State of Nevada with broad powers of eminent domain, acquire property, distribute water within the district, to call for bids for proposed works and issue funding or refunding bonds and to generate, transmit or sell electricity.

Drainage Districts

NRS 540.010 through 540.790, inclusive, provides for the organization of Drainage Districts within the State of Nevada with authority to plan a system of canal or canals, drains, drain ditches, and works where petitioned in accordance with this section.

Water Conservancy Districts

NRS 541.010 through 541.420, inclusive, provides for establishing Water Conservancy Districts within the State of Nevada for the conservation and development of the water and land resources and for the greatest beneficial use of water within the state.

Watershed Protection Districts

NRS 542.010 through 542.090, inclusive, provides the authority to establish Watershed Protection and Flood Prevention Districts within the State of Nevada with powers of public, quasi-municipal corporation.

Flood Control Districts

NRS 543.010 through 543.840, inclusive, provides for Flood Control and Flood Control Districts by participation by the State of Nevada, Counties, Cities, and Public Districts with the United States in flood control projects. This chapter provides the authority to establish Flood Control Districts and defines the powers and duties of a board of directors to tax and bond and with the right of eminent domain within the district.

Weather Modification Research

NRS 544.010 through 544.240, inclusive, provides for Weather Modification Research and Regulation of Weather Modification Operations.

Water Pollution

NRS 445.050 designates the Department of Health and Welfare as the State Water Pollution Agency for all purposes of the Water Quality Act of 1965, Public Law 89-234. NRS 445.060 grants the powers and outlines the duties of the State Water Pollution Agency to cooperate with all agencies of the Federal Government in all matters relating to water pollution.

The State of Nevada through the Department of Health and Welfare has prepared and submitted "Interstate Water Quality Standards and a Plan of Implementation" to the Federal Water Pollution Control Administration, Department of the Interior, prior to the July 1, 1967, date as required under the Water Quality Act of 1965, Public Law 89-234.

Case Law

In the early years of the territory and the state the application and use of water under the riparian doctrine on mining claims where title was vested in the Federal Government proved unsatisfactory and resulted in continuous litigation and conflict. The courts attempted to provide orderly development of the water resources by considered decisions but the applicability of the riparian doctrine did not suit the conditions prevailing in the state. Court decisions did influence the legislature to enact laws to govern the regulation of water by statutory provisions which have been developed and expanded to the present Nevada Water Law.

Early Application of Appropriation Doctrine Lodell v. Simpson, 2 Nev. 274, 278-279, (1866). The Supreme Court recognized and applied the doctrine of appropriation in its first reported decision in a controversy over water rights following the doctrine well settled in California that as between persons claiming rights to the use of water, merely by the appropriation of the water, the one has the best right who is the first in time. The court discussed the rights of a riparian proprietor, but specifically withheld comment as to what it might have held if the plaintiff had relied upon his rights as a riparian proprietor rather than as an actual appropriator.

Early Appropriation Doctrine on Public Lands Ophir Silver Mining Co. vs. Carpenter, 4 Nev. 534, 543 (1869). The court stated that where the right to the use of running water is based upon appropriation and not upon an ownership in the soil, it is the generally recognized rule in Nevada that priority of appropriation gives the superior right. In Convington vs. Becker, 5 Nev. 281, 282-283 (1869) the parties had agreed that the only title to the lands of the plaintiffs and defendants was a possessory one, the fee being in the Federal Government; hence there could be no basis for a claim of riparian rights in the case.

Nevada Riparian Doctrine Vansickle vs. Haines, 7 Nev. 249, 256, 257, 260-261, 265, 285 (1872). The Nevada Supreme Court held that the common law was the law of Nevada and must prevail in all cases where the right to water was based upon absolute ownership of the soil; that running water was primarily an incident to or part of the soil over which it naturally flowed; that the right of the riparian proprietor was a right incident to his ownership of the land to have the water flow in its natural course and condition, subject only to certain uses by other riparian proprietors; and that a patent from the United States issued prior to the passage of the act of 1866, conveyed to the patentee not only the land but the stream naturally flowing through it.

Repudiation of Riparian Doctrine Jones vs. Adams, 19 Nev. 78, 84-88, 6 Pac. 442 (1885). The Nevada Supreme Court reversed its stand with respect to riparian rights and concluded that the riparian doctrine did not serve the wants and necessities of the people for either mining or agriculture and has since applied the doctrine of prior appropriation.

Water Right Appurtenant To Land Prosoli vs. Steamboat Canal Co., 37 Nev. 154, 161, 140 Pac. 720, 144 Pac. 744 (1914). It is well settled in Nevada and in the arid region generally that a water right for agricultural purposes, to be available and effective, must be attached to the land and become in a sense appurtenant thereto by actual application of the water to beneficial use.

Beneficial Use Union Mill & Mining Co. vs. Dangberg, 81 Fed. 73, 97 (D. Nev. 1897). An excessive diversion of water for any purpose cannot be regarded as a diversion to a beneficial use. Water in this state is too scarce, needful, and precious for irrigation and other purposes to admit of waste.

In re. Manse Spring and Its Tributaries, 60 Nev. 280, 286, 108 Pac. (2d) 311 (1940). An appropriative right is a usufructuary right, and the basis of its acquisition is beneficial use.

Reservation Doctrine United States vs. Walker River Irrigation District, 104 Fed. (2d) 334, 335-336, 339-340 (C.C.A. 9th, 1939). The Federal Circuit Court of Appeals of the Ninth Circuit held that in the establishment of the Walker River Indian Reservation there was an implied reservation of water to the extent reasonably necessary to supply the needs of the Indians, even though there was no agreement or treaty with the Indians in connection therewith, the Indians being at that time at war with the whites.

State of Nevada Ex Rel Hugh Shamberger vs. United States 165 F. Supp. 600 (D. Nev. 1958). The State of Nevada sought a declaration that the United States may not make use of underground waters developed by wells located on a military reservation (U.S. Naval Ammunition Depot, Hawthorne, Nevada) without applying therefor pursuant to State law. The United States District Court, District of Nevada, dismissed the complaint by decision dated August 27, 1958, on the grounds that there is no mandate in constitutional, statutory or decisional law that compels the Federal Government to bend its knee to state law and regulation.

Doctrine of Relation Ophir Silver Mining Co. vs. Carpenter, 4 Nev. 534, 543-544 (1869). If the work of constructing facilities, diverting, and using water is prosecuted with reasonable diligence, the date of priority of the right relates back to the time when the first step was taken to obtain the right. If, however, the work is not prosecuted with reasonable diligence, then the priority of the right does not relate back, but generally dates from the time when the work is completed or the appropriation fully perfected.

Prescriptive Right Application of Filippini, 66 Nev. 17, 22-23, 26-27, 202 Pac. (2d) 535, 538, (1949). The Nevada Supreme Court pointed out that an appropriation of water is an original acquisition from the government by diversion and use and that no rights can be acquired against or from the government by prescription, and hence there can be no appropriation by prescription.

Developed Waters Cardelli vs. Comstock Tunnel Co., 26 Nev. 284, 293-295, 66 Pac. 950 (1901). Developed waters are the property of the persons who develop them. Such waters are not like waters running in streams on the public domain of the United States. They are produced by the capital, labor, and enterprise of those developing them, and by such developing they become the property of those engaged in the enterprise.

Attorney General Opinions

Date of Appropriation Opinion No. 94 dated October 14, 1919. The right to the water relates to the initiation by appropriation in the method prescribed by law and not to the time of application of the water to a beneficial use. However, the right once initiated is subject to forfeiture if future provisions of law are not pursued, but when once the law has been fully complied with, the right becomes irrevocable and thereafter may only be lost by abandonment or for some similar reason.

Military Reservation Opinion No. 740 dated April 19, 1949. The cession of jurisdiction over the land comprising the U. S. Naval Ammunition Depot at Hawthorne, Nevada, as contained in Chapter 144, Statutes of Nevada 1935, did not cede the jurisdiction of the State and/or its Water Law over and concerning the waters upon and in the lands comprising the Naval Depot.

Geo-thermal Steam Opinion dated August 12, 1965. Applications to appropriate geo-thermal steam are within the jurisdiction of the State Engineer and are to be administered under the provisions of the present Nevada Water Law.

Developed Water Opinion No. 331 dated April 25, 1966. Developed water is subject to appropriation and that the precedent of Cardelli vs. Comstock is superseded by statutory water laws.

Administrative Structure

Interstate Agencies

Pacific Northwest River Basins Commission This region is one of 18 framework studies covering major river basins in the United States established on recommendations of the Senate Select Committee on National Water Resources. The Water Resources Planning Act of 1965 provided the authority for the formation of the Pacific Northwest River Basins Commission which has assumed the coordination responsibilities of the Columbia-North Pacific Region.

The framework study of the water and related land resources and needs of the Pacific Northwest is in progress on a cooperative basis by the seven states within the region and by many Federal agencies. The principal objective of the study is to determine

the future needs of the Northwest for water and related lands, to compare these needs to available resources, and to develop general plans to meet these projected needs to the year 2020.

The study area covers all of the Columbia River Basin in the United States and includes all of the State of Washington, most of the states of Oregon and Idaho, and portions of the states of Nevada, Wyoming, Utah, and Montana. The State of Nevada contains some 5,154 square miles of land area in the watershed of the Snake River system of the Columbia River Basin.

Columbia Interstate Compact Nevada Revised Statutes 538.530 ratifies and approves the Columbia Interstate Compact as signed at the city of Spokane in the State of Washington on October 3, 1960, by commissioners acting pursuant to authority granted by the provisions of NRS 538.420 to 538.520, inclusive.

The purposes of this compact with respect to the land and water resources of the Columbia River Basin are:

1. To facilitate and promote their orderly, integrated and comprehensive development, use, conservation and control for various purposes.
2. To further intergovernmental cooperation and comity with respect to these resources and the programs for their use and development by, among other things,
 - a. Providing for the relationships between certain beneficial uses of water as a practicable means of effecting an equitable apportionment thereof, and for means of facilitating and effecting additional interstate agreement with respect thereto, and
 - b. Providing an interstate body to consider the various common problems with respect to the use and development of these resources and to plan for, review, and recommend plans for their development.

Bureau of Land Management A total of approximately 87.1 percent of the land in the State of Nevada is public domain with title resting with the United States Government and managed by the Department of the Interior, Bureau of Land Management. All Desert Land Entry applications must also have a valid application with the State of Nevada to appropriate water to a beneficial use.

U.S.D.A., Forest Service Public domain land under the jurisdiction of the U.S.D.A., Forest Service, totals 7.7 percent of the total lands in the State of Nevada and approximately 9.0 percent of the total public domain held by the United States Government.

State Agencies

Department of Conservation and Natural Resources This Department was created in 1957 by Nevada Revised Statutes 232.010 to 232.158, inclusive. The divisions of the Department of Conservation and Natural Resources consist of:

1. Division of Water Resources
Administered by the State Engineer
appointed by the Director.
2. Division of State Lands
Administered by the Director as ex officio
state land register.
3. Division of Forestry
Administered by the State Forester
Firewarden appointed by the Director.
4. Division of Oil and Gas Conservation
Administered by the Director in cooperation with the
Nevada Oil and Gas Conservation Commission.
5. Division of State Parks
Administered by an administrator appointed by the
Director.
6. State committee on Federal land law with
the Director to serve as chairman and the
appointment of the assistant director to
act as secretary.

The Director of the Department of Conservation and Natural Resources is the executive head of the department and directs and supervises all administrative and technical activities of the department. The Director is responsible to formulate the policy and direct the activities of the department and the various divisions. The Director may adopt, amend, and rescind rules and regulations, plan studies, and investigations of the department and divisions. The Director also coordinates all studies in the State of Nevada concerned with the supply, development, use, and conservation of water.

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PACIFIC NORTHWEST RIVER BASINS COMMISSION VANCOUVER WASH F/G 8/6
COLUMBIA-NORTH PACIFIC REGION COMPREHENSIVE FRAMEWORK STUDY OF --ETC(U)
MAR 70 E L WHITE, G J GRONEWALD, H H RALPHS

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Department of Health and Welfare Pursuant to the Water Quality Act of 1965, Public Law 89-234, the Division of Health has prepared and submitted "Interstate Water Quality Standards and a Plan of Implementation" to the Federal Water Pollution Control Administration prior to July 1, 1967.

Nevada Revised Statutes 445.050 designates the Department of Health and Welfare as the State Water Pollution Agency for all purposes of the Water Quality Act of 1965. NRS 445.060 grants the powers and outlines the duties of the State Water Pollution Agency to cooperate with all agencies of the Federal Government in all matters relating to water pollution.

Public Service Commission The Division of Water Resources consults and reviews all applications for permission to appropriate water for public sale and distribution with the Public Service Commission. The applicant must submit evidence to the Division of Water Resources of having filed an application for a Certificate of Public Convenience and Necessity with the Public Service Commission before a permit to appropriate water will be granted.

State Board of Registered Professional Engineers NRS 533.080, Section 2 provides that any registered professional engineer or land surveyor, qualified and registered in the State of Nevada, who has a practical knowledge of surveying or engineering and who is familiar with land surveying and mapping and the measurement of water, and who is of good moral standing, shall be considered for appointment as a State Water Right Surveyor upon application to the State Engineer. The application shall be in the form prescribed by the State Engineer and shall be accompanied by a fee of \$25.

State Board of Contractors NRS 534.140, Section 1, provides that every well driller, before engaging in the physical drilling of a well in the State of Nevada for the development of water, shall annually make application to the State Engineer for a license to drill. NRS 534.140, Section 7, requires every well driller, before engaging in the physical drilling of a well in this state for the development of water, who is the owner of a well-drilling rig, or who has a well-drilling rig under lease or rental, or who has a contract to purchase a well-drilling rig, shall obtain a license as a well driller from the State Board of Contractors.

Local Agencies

Irrigation Districts Nevada Revised Statutes, Chapter 539, provides the authority for the formation of an irrigation district by petition of a majority of land owners within the proposed district without regard to county boundaries. Irrigation Districts are granted broad powers under authority of Chapter 539 as follows:

1. Right of eminent domain.
2. Acquire property by purchase.
3. Distribute, sell, or lease water.
4. Reject bids or award contract for proposed work.
5. Issue and sell funding bonds.
6. Generate, transmit, or sell electricity.
7. Levy assessments.
8. Form improvement districts.
9. Make agreements with districts of adjoining states.

Drainage Districts Nevada Revised Statutes, Chapter 540, provides the authority to organize a drainage district by petition of a majority of the land owners within the proposed district without regard to county boundaries. A drainage district is administered by a Board of Supervisors appointed by the County Commissioners of the county having the largest land area of the district located within the county. Under the authority of Chapter 540, the Board of Supervisors of a drainage district have the following powers:

1. Condemn property.
2. Acquire property by purchase.
3. Plan a system of canals, drains, or drain ditches on lands proposed to be drained.
4. Reject bids or award contracts for proposed works.
5. Issue and sell funding bonds.
6. Submit assessments to County Commissioners.

7. Merge or consolidate with an irrigation district.

Water Conservancy Districts Nevada Revised Statutes, Chapter 541, vests the district courts with jurisdiction to establish water conservancy districts. Chapter 541 does not grant the district courts jurisdiction to settle questions of priority of appropriation of water for irrigation purposes from the same stream or its tributaries.

A water conservancy district may be formed by petition of at least 20 percent of the owners of land within the proposed district to be filed with the clerk of the district court. District court appoints a board of directors with broad powers for the conservation and development of the water and land resources and for the greatest beneficial use of water. Under the authority granted by Chapter 541 the board of directors have the following powers on behalf of the district:

1. Perpetual succession.
2. Acquire all water, waterworks, water rights and sources of water supply, and real and personal property.
3. Exercise power of eminent domain.
4. Construct and maintain works across any stream or watercourse in accordance with State law.
5. Contract with United States or any agency to construct, preserve, operate and maintain tunnels, drains, pipelines, reservoirs, basins, diversion canals and works, dams, and powerplants. Also to acquire and sell or dispose of perpetual rights to the use of water and electrical energy from such works.
6. Distribute water on basis of beneficial use and levy assessments.
7. Fix rates for equitable sale or lease of water not allotted to lands in the district.
8. Enter contracts for personal services.
9. Adopt plans and specifications for construction and operation of works.

10. To appropriate and acquire water and water rights to develop, store, and transport water; subscribe for, purchase and acquire stock in canal companies, water companies, and water users associations; to provide, sell, lease, and deliver water for municipal and domestic purposes, irrigation, power, milling, manufacturing, mining, metallurgical and any and all other beneficial uses, and to derive revenue and benefits therefrom; fix terms and rates thereof.
11. Generate electrical energy and contract for the generation, distribution, and sale of such energy.
12. Invest surplus money in the district treasury.
13. Borrow money and incur indebtedness.
14. Adopt laws not in conflict with constitution and laws of the state.

NRS 541.410 provides a liberal construction of Chapter 541 to secure and preserve public health, safety, convenience, and welfare.

Watershed Protection and Flood Prevention Districts Nevada Revised Statutes, Chapter 542, provides the authority to create a watershed protection and flood prevention district not to exceed 750,000 acres by a petition to the county commissioners by 10 percent of the owners of property within the proposed district.

A watershed protection and flood prevention district established under Chapter 542 has powers of public, quasi-municipal corporation to:

1. Cooperate with the State of Nevada and any agencies of the United States or any public or private corporations in the investigations or construction of any works of improvement for controlling flood or storm waters or for protection of life or property, or for conservation of water to beneficial use within the district.
2. Prevent damage to watersheds and to further conservation, development, utilization, and disposal of water.
3. Acquire property necessary to exercise power granted to district by purchase or condemnation.

4. Borrow money from flood control revolving fund in state treasury.

Flood Control Districts Nevada Revised Statutes Chapter 543 provides the authority to establish flood control districts by county commissioners in any county having a population of 100,000 or more. The board of county commissioners are vested with the jurisdiction, power, and authority to organize a district by adoption of an ordinance.

NRS 543.020 - Declaration of policy of State of Nevada to cooperate with agencies of United States and with the counties, cities, and public districts of the state in preventing loss of life and property, disruption of commerce, interruption of transportation and communication and waste of water resulting from floods, and in furthering the conservation, development, utilization, and disposal of water.

Board of directors appointed by the county commissioners govern the district and have power to:

1. Acquire, construct, maintain, and operate projects, improvements, and facilities to control flood and storm waters.
2. Conserve such waters for beneficial and useful purposes.
3. Prevent waste of water or diminution of the water supply.
4. Exercise right of eminent domain.
5. Borrow money and issue bonds.
6. Levy and collect taxes.

NRS 543.220 provides for a liberal construction of Chapter 543 to secure public health, safety, convenience, and welfare.

Weather Modification Research Nevada Revised Statutes Chapter 544 provide the authority for the State Department of Conservation and Natural Resources to conduct weather modification research programs. The director of the state department of conservation and natural resources is authorized to:

1. Establish advisory committees concerning legislation, policies, administration, and research.

2. Establish by regulation or order a standard to govern extent of research project.
3. Conduct such studies and investigations deemed necessary.
4. Appoint and fix compensation of personnel including specialists and consultants.
5. Cooperate with public or private agencies.
6. Represent the state at any and all plans, procedures, or negotiations for interstate compacts relating to weather modification and control.
7. Act for and represent the state, counties, cities, and private or public agencies in contracting for performance of weather modification or cloud seeding operations.

Advisory Boards Nevada Revised Statutes, Chapter 534 provides for appointment of two advisory boards which are unique in ground-water basin management.

1. Within a designated ground-water basin the governing body or water board shall furnish advice or assistance to the State Engineer upon request. An example is the Las Vegas Valley Ground-Water Board who makes recommendations to the State Engineer for approval or denial of applications to appropriate ground water within the Las Vegas Valley ground-water basin.
2. Well drillers' advisory board appointed by the State Engineer to examine applications for well drillers' license and submit findings to the State Engineer.

Other Entities Other intra-state private or quasi-public entities directly related to the distribution of water in the State of Nevada are:

1. Public utilities operating under the regulations and control of the Public Service Commission.
2. Nonprofit mutual water companies serving users in a subdivision or an area where the property

was purchased with water service included in the sale. Title to the water right may rest with the land developer or be transferred to the mutual water company.

3. Nonprofit water users association serving a subdivision or an area where the users acquire a water right in the name of the association by purchase or by application to appropriate to serve themselves by payment of only those costs to maintain the distribution system.

State Water Policy

The bitter struggle for control of a limited supply of water in this arid state is reflected in the water policy adopted by the state legislature extending over a period of more than one hundred years of litigation and use. The application of the common law doctrine of riparian rights was adopted in the arid West from practice brought from the water abundant East coast. Western water law of water rights embraces two diametrically opposite principles--the common law doctrine of riparian rights and the statutory doctrine of prior appropriation. Under the riparian doctrine, the owner of land contiguous to a stream has certain rights to the flow of the water, by virtue of such land ownership. Under the appropriation doctrine, the first user of the water acquired a priority right to continue the use.

Doctrine of Appropriation The basic philosophy of the right to the use of water in Nevada was changed in 1885 by a Supreme Court decision reversing its stand with respect to the riparian right doctrine and has since applied the doctrine of prior appropriation. The Court concluded that the riparian doctrine did not serve the wants and necessities of the people of the state for either mining or agriculture. Water could then be appropriated for use on mining claims or agriculture lands under the Homestead Act of 1866, that were located miles from a stream on public domain lands where title was still vested with the United States until patent.

The basic provisions of the Nevada Water policy are generally expressed under Nevada Revised Statutes, Chapter 533, Section 10 through 85, inclusive. Chapter 533 provides the statutory procedure for the three prime functions of the Division of Water Resources administered by the State Engineer.

1. Adjudication of claims of vested water rights.

2. Appropriation of public water to acquire a water right.
3. Distribution of water in accordance to a court decree.

The fundamental elements of the Nevada water policy are contained in the general provisions, Chapter 533, and are briefly summarized here.

1. The water from all sources of supply within the boundaries of the state, whether above or beneath the surface of the ground, belongs to the public.
2. Water may be appropriated to beneficial use subject to existing rights at the source.
3. Beneficial use shall be the basis, the measure, and the limit of the right to use water.
4. All water used for beneficial purposes shall remain appurtenant to the place of use.
 - a. Chapter 533 contains provisions to change the point of diversion and place and manner of use by application to the State Engineer without loss of priority.
5. The right to divert water ceases when the necessity for the use of the water does not exist.
6. The beneficial use of water is declared a public use and any person may exercise the right of eminent domain for the lawful diversion, conveyance and storage of waters.

A unique feature permitted in Chapter 533 of the Nevada Water Law is the principle of rotation in the use of water to bring about a more economical use of the available water supply. Rotation is permitted when agreed to between the users on a stream when the natural flow has reached a minimum and cannot serve all users during the irrigation season. The practice of rotating the use of water can give larger heads for shorter periods of time, with the resultant increases in irrigation efficiency and lower operating costs.

Reciprocal Agreements Sections 515 and 520 of Chapter 533 of the Nevada Water Law authorize permits to be granted to divert water outside of the state to be used in Nevada or water diverted in Nevada to be used in another state when such state authorizes such diversion or use. However, water appropriated and beneficially used in Nevada cannot be changed or transferred beyond the borders of the State of Nevada.

Ground Water Chapter 534 of the Nevada Revised Statutes was the first legislation specifically designed for the regulation and administration of underground water. This chapter provides statutory procedure to appropriate underground water upon application to the State Engineer. In addition, this chapter authorizes the State Engineer to designate ground-water basins, to establish preferred uses of water within such basins and establish priorities, to limit withdrawals of ground water from such basin, and to issue temporary permits to appropriate ground water which may be revoked when water can be served by a public utility or water district.

Appropriation of Effluent Permits to appropriate water as effluent from sewage treatment plants have been granted by the State Engineer in the following manner. Section 440 of Chapter 533 of the Nevada Revised Statutes provides for primary and secondary permits to store water for irrigation purposes. The person holding the primary permit may store water in a reservoir and is not required to show a beneficial use. The person applying for a secondary permit must show an agreement has been entered into with the holder of the primary permit for the use of the stored water. The holder of the secondary permit is required to show beneficial use and receive a certificate of appropriation.

The policy of issuing a primary and a secondary permit under the above section of Chapter 533 has been adopted to applications to appropriate water as effluent from sewage treatment plants throughout the state. Usually the municipality erecting the treatment plant will make application and receive the primary permit. The municipality will then sell or distribute the effluent to one or more applicants for a secondary permit by issuance of an agreement as evidence to the State Engineer.

Adjudication

Salmon River Canal Co., Ltd. The Salmon River Canal Co., Ltd. is the owner of a project devised and constructed under the provisions of the Carey Act of Congress, whereby the water coming down the Salmon River is impounded by means of a dam and reservoir located in Idaho a few miles north of the Nevada-Idaho State line.

The dam was completed in 1911 and its use for irrigation began in June of that year. The appropriation was acquired under three permits issued by the State Engineer of Idaho.

Litigation and Decrees Prior to 1915, there was a considerable litigation between the Nevada users of the headwaters of the Salmon River, originally a tributary of the Snake River, and the downstream users in Idaho. A decree entered March 23, 1916, by the District Court of the United States for the District of Idaho, Southern Division, granted the Nevada users (Vineyard Land and Stock Co.) a total of 12,500 acre-feet of water to satisfy their rights which were prior to those of the Idaho users (Salmon River Canal Co., Ltd.). This decree was appealed by the Vineyard Land and Stock Co., but the decision rendered August 6, 1917, affirmed the decree. A decree dated March 3, 1923, by the Fourth Judicial District of the State of Nevada adjudicated all vested rights of the Salmon River and tributaries in Nevada and provided for 40,338 acre-feet of water appurtenant to 13,433.48 acres of land. In March 1934, the Salmon River Canal Co., Ltd. filed a petition for the adoption of rules for administering the Federal Decree. The opinion filed January 16, 1935, by the District Court of the United States, for the District of Idaho, Southern Division, recommended adoption of the proposed rules. The Vineyard Land and Stock Co. appealed this decision to the Circuit Court of Appeals, Ninth Circuit and the proposed rules were drastically curtailed. The 1916 decree involved only the water rights owned by the Vineyard Land and Stock Co. in Nevada and the Salmon River Canal Co. in Idaho and was in no way binding on other water users in Nevada.

Salmon River Agreement In May 1947, the Salmon River Canal Co., Ltd. acquired a portion of the property of the Vineyard Land and Stock Co. together with appurtenant water rights. In August 1947, 13 applications were filed with the Nevada State Engineer by other users to appropriate water from the Salmon River and tributaries. In May 1949, the Salmon River Canal Co., Ltd. filed application with the Nevada State Engineer to transfer all of the water rights acquired by purchase of a portion of the property of the Vineyard Land and Stock Co. in Nevada to portions of the property in Idaho. All applications to appropriate and to change were protested and resulted in the Salmon River Agreement dated October 6, 1952, between the Salmon River Canal Co., Ltd. and Nevada users which had the effect of settling the water rights issue on the Salmon River.

Owyhee River Adjudication proceedings on the Owyhee River and tributaries were initiated January 28, 1924, and progressed to Order of Taking Proofs on January 24, 1925. Suit was filed on June 17, 1924, in the District Court of the United States, for the

District of Nevada by the Union Land and Cattle Co. against R. M. Woodward, et al, for appropriating the waters of the Owyhee River belonging to the Union Land and Cattle Co. On July 25, 1930, order was made by the United States District Court of Nevada making all parties of the Tuscarora branch of the Owyhee River and its tributaries in Nevada defendant in the suit of Ellison Ranching Co., successors of the Union Land and Cattle Co. vs. R. M. Woodward, et al. The Court appointed a special master on September 18, 1931, to take evidence and to submit to the Court findings and form of proposed decree. On November 21, 1939, the district court entered an order denying the plaintiff's motion to set for trial and granted motion of the defendants to dismiss the case without prejudice to the institution of a new case. No further proceedings have been recorded since this date. The Nevada State Engineer has continued to accept claims of a vested right by filing Proofs of Appropriation submitted in accordance with statutory procedure and accompanied by a supporting map.

Coleman Valley Three permits have been approved by the Nevada State Engineer to appropriate water from interstate streams in Coleman Valley in Nevada for use on 214.5 acres of land in Nevada and 2,179.3 acres of land in Oregon. Water is stored in Coleman Reservoir in Nevada from an unnamed creek and appropriated from Home and Cottonwood Creeks.

Water Resource Planning

A water resource planning section has recently been established within the Division of Water Resources. The responsibilities of the new section will be to provide and coordinate comprehensive planning for the State of Nevada for water, land, recreation, parks, forestry, and other related natural resources.

Program The inventory phase of the comprehensive water and related land resource planning program initiated by contractual agreements with the Center for Water Resources Research of the Desert Research Institute of the University of Nevada will be continued. The inventories will provide general information regarding hydrometeorology, ground water, surface water, water law, and activities of agencies and organizations concerned with problems pertaining to water and related land resources in Nevada. Work is also continuing on integration of water data into a data storage and retrieval system.

Plan In developing a comprehensive plan for water and related land resources, the Division of Water Resources will proceed in part as follows:

1. Establish and maintain better liaison principles with all Federal and State agencies having an interest in water planning. Working relationships will be created and maintained with the other ten Western States to achieve maximum cooperation and to take advantage of new approaches and concepts in water resource planning.
2. The existing comprehensive inventory program will be accelerated to determine Nevada total surface and ground water resources.
3. An appraisal of present land use and a complete survey of land suitability will have to be made for the entire state to determine water requirements.
4. A projection of future water requirements for municipal, industrial, agricultural, recreational, and other uses will be made in anticipation of meeting reasonably expected needs.
5. A program for the importation of water from alternate sources in other states which can be developed will be considered to supplement the limited supply of water in Nevada to meet indicated or projected demands.

Publications

1. U. S. Department of the Interior, Geological Survey,
Little Owyhee River Basin, Reconnaissance Series,
Report 48.
2. U. S. Department of the Interior, Geological Survey,
South Fork--Owyhee River Basin, Reconnaissance Series,
Report 48.
3. U. S. Department of the Interior, Geological Survey,
Independence Valley, Reconnaissance Series, Report 8.
4. U. S. Department of the Interior, Geological Survey,
Owyhee River Basin, Reconnaissance Series, Report 48.
5. U. S. Department of the Interior, Geological Survey.
Bruneau River Basin, Reconnaissance Series, Report 48.
6. U. S. Department of the Interior, Geological Survey,
Jarbridge River Basin, Reconnaissance Series, Report 48.
7. U. S. Department of the Interior, Geological Survey,
Salmon River Basin, Reconnaissance Series, Report 48.
8. U. S. Department of the Interior, Geological Survey,
Range Water Resources of a Part of the Elko Grazing
District, Elko County, Nevada.
9. U. S. Department of the Interior, Geological Survey,
Goose Creek Basin, Reconnaissance Series, Report 48.

OREGON STATE LAWS, POLICIES & PROGRAMS



PREPARED BY
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OREGON

State Water LawState Constitution

The Oregon Constitution is silent on water, but certain sections are applicable to the use and control of the State's waters. Article I, Section 18, provides that "private property shall not be taken for public use...without just compensation...; provided, that the use of all roads, ways, and waterways necessary to promote the transportation of the raw products of mine or farm or forest or water for beneficial use or drainage is necessary to the development and welfare of the state and is declared a public use."

A constitutional reference frequently cited is in Article XI, Section 7, with reference to debt limitation. According to an opinion of the Attorney General, this section would be violated were the state to agree to hold and save the United States free from damages due to the construction of certain works.

Article XI, Section 12, authorizes establishing Peoples' Utility Districts, one power of which is to acquire, develop, and/or otherwise provide for a supply of water, waterpower, and electric energy.

Article XI-D authorizes waterpower development by the state. To date, the legislature has not acted to provide means to implement this authority.

Statutes and Policy

Oregon's statutes relating to water use and control have evolved over a period of many years, progressively reflecting needs associated with the state's continuing growth. The Surface-Water Code of 1909 reflected the need for orderly control of rights to the use of the water resources, a need identified during the first 50 years of statehood. Irrigation District laws were passed to meet the demands of reclamation. Subsequently, other special purpose laws were enacted.

Many of the laws have been visionary in scope. The legislature's recognition of 10 beneficial uses of water in a law adopted in 1955, preceded by several years the Federal Government's recognition of beneficial functions other than power, navigation, and irrigation.

Most of Oregon's water laws have stood the test of time and provide a solid background for policies and programs relating to the use and control of the water resources. These laws are compatible with Federal legislation.

Legislative acts pertaining to the use and control of the waters of the state are embodied in Oregon Revised Statutes. The policies and programs pertaining to such use and control emanate from legislative policy declaration and from the authority vested in the various state boards, commissions, and departments created by those statutes.

In 1955, the legislative assembly made the following declaration of policy regarding water resources, as contained in ORS 536.220:

"(1) The Legislative Assembly recognizes and declares that:

(a) The maintenance of the present level of the economic and general welfare of the people of this state and the future growth and development of this state for the increased economic and general welfare of the people thereof are in large part dependent upon a proper utilization and control of the water resources of this state, and such use and control is therefore a matter of greatest concern and highest priority.

(b) A proper utilization and control of the water resources of this state can be achieved only through a coordinated, integrated state water resources policy, through plans and programs for the development of such water resources and through other activities designed to encourage, promote, and secure the maximum beneficial use and control of such water resources, all carried out by a single state agency.

(c) The economic and general welfare of the people of this state have been seriously impaired and are in danger of further impairment by the exercise of some single-purpose power or influence over the water resources of this state or portions thereof by each of a large number of public authorities, and by an equally large number of legislative declarations by statute of single-purpose policies with regard to such water resources, resulting in friction and duplication of activity among such public authorities, in confusion as to what is primary and what is secondary beneficial use or control of such water resources and in a consequent failure to utilize and control such water resources for multiple purposes for the maximum beneficial use and control possible and necessary."

In conformance therewith, the State Water Resources Board was created and charged to progressively formulate an integrated, coordinated program for the use and control of all the water resources of the state, issue statements thereof, and devise plans and programs for this development and maximum beneficial use and control of the state's water resources.

The board's program and orders have been issued classifying the unappropriated waters as to the highest and best use, establishing numerous minimum perennial streamflows below which future appropriations shall not be made, and restricting appropriations from certain mountain lakes. Programs and orders have been issued for 12 of the state's 18 basins.

The classification of sources of water as to use and quantities of use contained in the board's program statements has the effect of restricting the uses and quantities of uses to those specified by the board. The board's statements are binding on every state agency or public corporation in the exercise of any power, duty, or privilege affecting the water resources of the state.

A number of state agencies have statutory authority over specific users of the state's water resources, to wit: the State Department of Environmental Quality (formerly State Sanitary Authority), the State Game Commission, and the Fish Commission of Oregon.

The major water-resource-oriented state agencies are listed below. Also listed are the statutes under which they operate or with which they are concerned, and statements of their primary responsibilities also are included. Except where otherwise specified, the chapter numbers cited refer to Oregon Revised Statutes.

State Water Resources Board Chapter 536, specifically ORS 536.210 to 536.550.

Other pertinent statutes:

Chapter 543: Hydroelectric Power Projects
549: Drainage and Flood Control Generally
567 (Oregon Laws, 1967): Removal of Material
Bed and Banks of the Waters of this State.

The State Water Resources Board is responsible for progressively formulating a state water resources policy and for devising plans and programs for the development of, and to encourage, promote, and secure the maximum beneficial use of the state's water resources.

Other activities carried on concurrently include commenting, on behalf of the state, on Federal project proposals; participating in Federal flood control projects; holding hearings and rendering decisions upon water use conflicts, upon proper referral; cooperating with and promoting coordination between local, state, and Federal water use plans, programs, and projects; approving applications for carrying out flood plain identification studies, identifying and studying methods of augmenting use of future reservoir sites; and representing the state on certain compacts of agreement authorized by the legislature concerning the state's water resources.

State Engineer Chapter 536, specifically ORS 536.010 to 536.080.

Other pertinent statutes:

- Chapter 537: Appropriation of Water Generally
- 538: Withdrawal of Certain Waters from Appropriation; Special Municipal and County Water Rights
- 539: Determination of Water Rights Initiated before February 24, 1909
- 540: Distribution of Water; Watermasters; Change in Use, Transfer, or Abandonment of Water Rights
- 541: Miscellaneous Provisions as to Water Rights and Uses
- 542: Water Resource Surveys and Projects; Compacts
- 543: Hydroelectric Power Projects
- 545: Irrigation Districts
- 547: Drainage Districts
- 548: Provisions Applicable Both to Drainage Districts and to Irrigation Districts
- 551: Diking Districts
- 555: Reclamation Projects
- 261: Peoples' Utility Districts

The State Engineer enforces laws relating to the appropriation, diversion, and use of the public waters of the state; accepts all applications for rights to appropriate water, including the generation of hydroelectric power, and issues preliminary permits, licenses, permits, and certificates authorizing the use of public water; administratively determines the relative rights to the waters of any stream or ground-water reservoir; promulgates regulations for fair distribution of water and appoints and instructs watermasters in said distribution; defines ground-water reservoirs; determines critical ground-water areas, lowest permissible water levels; and

prohibits the pollution or impairment of quality of ground-water bodies; examines plans for irrigation district works prior to construction; approves contract construction plans of drainage districts; exercises jurisdiction over many of the financial affairs of irrigation and drainage districts; exercises jurisdiction over proceedings for the formation of water conservation districts; cooperates with Federal, state, or local agencies in stream gaging, topographic mapping, snow surveys, and investigation of ground-water resources, irrigation works, proposed dams, reservoirs, and hydraulic structures; inspects any hydraulic structure and orders modification or repairs necessary to prevent failure; examines petitions, investigates feasibility, and forms peoples' utility districts; represents Oregon on all matters pertaining to Public Law 566 and administers the Carey Act.

Department of Environmental Quality Chapters 449 and 459.

The Department of Environmental Quality is responsible for the administration and enforcement of the laws of the state relating to air and water pollution control and solid waste disposal, and encourages voluntary cooperation by all persons in obtaining the greatest possible purity of air and water resources in the state; develops comprehensive plans and programs for air and water pollution control and solid waste disposal; makes field investigations and studies; establishes standards of quality and purity of air and water; examines and passes on plans for waste disposal works and air pollution control devices; issues waste discharge permits; receives complaints, petitions, and remonstrances; and holds hearings, enters orders, and enforces statutes relating to air and water pollution control and solid waste disposal.

State Game Commission Chapter 496.

Other pertinent statutes:

- Chapter 497: Licenses and Permits
- 498: Hunting and Fishing Regulations;
Miscellaneous Wildlife Protective
Measures
- 501: Hatcheries, Refuges, and Reservations;
Shooting Preserves.

The Game Commission formulates general policies and programs for management of game fish, game animals, furbearing animals, game birds, and nongame birds; establishes open seasons, bag limits, and methods of taking species; operates fish hatcheries, game farms, public shooting grounds, game management areas, and public access sites; improves fish and wildlife habitats; provides landowners

services related to wildlife and hunting; and conducts research and field investigations of population inventories, habitat relationships, and general environmental factors."

Fish Commission of Oregon Chapter 506.

Other pertinent statutes:

- Chapter 507: Compacts with Other States
- 508: Licenses
- 509: General Protective Regulations
- 511: Local and Special Regulations
- 513: Packing Fish and Manufacture of Fish Products

The Fish Commission establishes policies in the administration of the commercial fishing and fisheries laws; declares open and closed seasons for commercial fishing in or on certain waters of the state; has been granted such further powers as may be necessary to carry out the purpose and intent of all laws pertaining to the protection, preservation, propagation, cultivation, development, and promotion of all fishes within the state and all living animals that reside intertidally on the bottom in Oregon waters except game fish; examines dams and artificial obstructions in rivers and streams of the state frequented by salmon or other anadromous fish to determine that free passageway is afforded.

A number of other state agencies have interests vitally concerned with the state's water and related land resources:

- State Department of Geology and Mineral Industries
- State Land Board
- State Marine Board
- Parks and Recreation Division, State Highway Department
- State Department of Agriculture
- State Forestry Department
- State Soil and Water Conservation Committee
- Oregon State University
- Economic Development Division, State Department of Commerce
- Water Resources Research Institute, Oregon State University
- Bureau of Governmental Research and Service, University of Oregon

In addition to the statutes related to the agencies cited above, there are several others of special significance:

- Chapter 57: Private Corporation Generally
- 61: Nonprofit Corporations

- 62: Cooperatives
- 225: Municipal Utilities
- 264: Domestic Water Supply Corporations
- 274: Tide, Swamp, and Submerged Lands; Stream and Lake Beds
- 451: County Service Districts
- 552: Water Improvement Districts
- 553: Water Control Districts
- 554: Corporations for Irrigation, Drainage, Water Supply, or Flood Control
- 777: Port Districts

The Water Control District law, currently is the best adapted for providing assurances relative to Federal flood control projects. Districts formed under this law have the authority to assess through ad valorem taxes and, thus, are fiscally capable of satisfactory operation and maintenance.

Corporations formed under Chapter 554, frequently referred to as Improvement Districts, also are capable, legally, of providing the necessary assurances but have an ineffective method of collecting revenue for flood control project operation.

Case Law and Attorney General's Opinions

A compilation of case law or Attorney General's opinions, specifically concerning water, is not available for inclusion in this report. Attorney General's opinions are published monthly, however, and are available through his office.

The State Engineer publishes "Water Laws of Oregon" which includes those statutes, involving the State Engineer and the State Water Resources Board, most frequently used by the public. He also compiles and publishes "Irrigation District Laws of Oregon" and "Peoples' Utility District Law." Each of these three publications contains miscellaneous annotations citing notes of decisions and Attorney General's opinions.

Water Rights

All waters within the State of Oregon from all sources (except a spring which does not flow into a well-defined channel and off the property of origin, under natural conditions) are declared by statute to belong to the public.

Subject to existing rights, all public waters within the state excepting those which may have been withdrawn by legislative action or by order of the State Engineer or the Water Resources Board may be appropriated for beneficial use by complying with the requirements of the Surface-Water Code or the Ground-Water Act and not otherwise.

Doctrine

Oregon is essentially an appropriation-doctrine state, and the terminology "riparian rights" has become little more than legal fiction. In cases brought before the Oregon Supreme Court, it has held that the 1909 Water Code validly abrogated the common-law riparian rule except where the water had actually been applied to beneficial use prior to its enactment, which, in effect, makes it an appropriative right.

Surface Water

The appropriation of the surface waters of the State of Oregon--including the waters of rivers, lakes, streams, springs, waste waters, and waters stored in reservoirs and other surface sources--is governed by provisions of the Surface-Water Code, adopted on February 24, 1909, and subsequent acts. Nothing in the code, however, is so construed as to take away or impair the vested right of any person, firm, corporation, or association to any right for surface waters which was initiated prior to February 24, 1909.

A legal right for any surface-water appropriation initiated after February 24, 1909, can be established only through application of water to beneficial use under the terms of a water-right permit issued by the State Engineer. A claim to a vested right by virtue of use prior to February 24, 1909, and continued use thereafter, can be determined and made a matter of record only through a legal proceeding, known as an adjudication. This proceeding involves several administrative steps by the State Engineer and is concluded by a decree of the circuit court.

Adjudication proceedings, completed for most eastern and southern Oregon streams, are still needed for most of the remainder of the state. They can be postponed, but not eliminated. Delays increase the cost and difficulty of determinations. Proof of vested rights becomes increasingly difficult since most of the witnesses having actual knowledge of original development are no longer available to testify.

Ground Water

The appropriation of ground water, which is obtained only through an artificial opening or an artificially altered natural opening into the earth (not including a natural spring), is governed by the provisions of the Ground-Water Act, adopted August 3, 1955.

The Ground-Water Act of 1955, which applies to the entire State of Oregon, repealed the underground water laws which had been in effect in that part of Oregon east of the summit of the Cascade

Range since 1927. It provided a means for registration of all claims of rights to appropriate ground water by virtue of use initiated before the effective date of the laws, and provides for later adjudication of the rights claimed to determine the extent and priority of each right.

A legal right for an appropriation of ground water, initiated after August 3, 1955, can be established only through beneficial use under the provisions of a ground-water permit issued by the State Engineer, except for the following uses: (1) stock watering purposes; (2) watering any lawn or noncommercial garden not exceeding one-half acre in area; (3) single or group domestic purposes in an amount not exceeding 15,000 gallons per day; or (4) for any single industrial or commercial purpose in an amount not exceeding 5,000 gallons per day. A permit is not necessary and cannot be issued for such exempted uses of ground water.

The prospective appropriator has the right to construct and test a water well for any purpose prior to applying for a permit to appropriate the water for beneficial use.

Change of Ownership

A completed and perfected water right, as evidenced by a certificate of water right, is appurtenant to the land on which the right was established and passes with the land through change of ownership, unless specifically reserved in the articles of conveyance. There is no statutory provision for transferring or assigning a completed and perfected water right from one owner to another.

An incomplete right under a water-right permit or a ground-water registration statement can be conveyed to a new owner only through the recording of an assignment in the office of the State Engineer. Forms for this purpose are supplied upon request. If the assignment is not recorded, it is not binding on anyone but the parties thereto and may result in cancellation of the water right.

Duration of a Right

A completed and perfected water right, as evidenced by a certificate of water right, remains valid and in force so long as it is not lost through intentional abandonment or through nonuse for a period of 5 successive years or more.

Access to Lakes and Streams

Authority of the State Engineer does not extend to matters of property rights; therefore, acceptance of an application or the

issuance of a permit should not be construed in any sense as granting a right-of-access to a stream or any rights-of-way for construction or maintenance of works necessary to the use of the water.

All rights-of-access and rights-of-way must be obtained from the owner of the property involved.

Diversion Between Basins

Diversion and use of waters out-of-state is forbidden except upon the express consent of the legislative assembly as provided in ORS 537.810 to 537.860.

Numerous diversions exist between watersheds within the state. Except where expressly forbidden by statute or order in conformance with a program adopted by the State Water Resources Board for the use and control of the waters involved, diversion between basins is permissible.

Eminent Domain

The right of eminent domain is provided under Chapter 772, Condemnation of Property by Private Corporation Generally; and Condemnation for Drainage, Irrigation, Water Systems, or Sewer Systems.

State Programs

The large number of state agencies and statutes, directly or indirectly concerned with water and related land resources, is indicative of the wide variety of current programs. Generally, the various programs have been identified in the description of agency responsibilities. Oregon Revised Statute 536.470, however, provides that the State Water Resources Board "may consult and cooperate with any state agency or public corporation of this or any other state, any interstate agency or any agency of the Federal Government for the purpose of promoting coordination between local, state, interstate, and Federal plans, programs, and projects for the use or control of the water resources of this state or to facilitate and assist the board in carrying out its functions as provided by law."

Studies based on a cooperative agreement with the United States Department of Agriculture's Soil Conservation Service, Economic Research Service, and Forest Service, under the provisions of section 6 of the Watershed Protection and Flood Prevention Act

have been undertaken by the Department's River Basin Survey Staff, Salem, Oregon. Reports have been published for 11 of the 18 basins in Oregon.

A study was conducted to identify Oregon's water requirements to the year 2070 for all beneficial uses including domestic, municipal, irrigation, power development, industrial, mining, recreation, wildlife, and fish life use, for water quality, and for navigation. Contracts were let to: Oregon State University (Soils and Irrigation Requirements and Forest Products Projections); Oregon State Sanitary Authority (Water Quality); Cornell, Howland, Hayes and Merryfield (Major Water Using Industries and Population Projections); and Battelle-Northwest (Recreation Projections). The Oregon State Game Commission supplied the basic data for fish and wildlife uses.

Further coordination of programs is achieved through the Committee on Natural Resources which meets with the Governor on a regular schedule.

LEGAL AND ADMINISTRATIVE ASPECTS
OF
UTAH WATER LAW



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UTAH

Introduction

This report deals primarily with the Utah law relating to water rights, Utah's water development and conservation programs, and the overall administration of the state's water resources. In addition to summarizing the law and administration practices relating to these subjects, some of the problems and constraints of the present system will also be noted.

The portion of this material which deals with the law of water rights is essentially a digest of information contained in the publication, "The Utah Law of Water Rights," by Wells A. Hutchins and Dallin W. Jensen. This publication contains a more detailed discussion on this subject as well as citations to statutes and case law.

Water RightsHistorical

The Utah law of water rights had its genesis in the settlement of the valley of the Great Salt Lake by pioneers of the L.D.S. Church. When these pioneers arrived in Utah in the summer of 1847, they found a desert terrain which was generally unproductive without irrigation. In order to sustain themselves in this arid country, it was necessary to develop an extensive irrigation program as part of this settlement. The irrigation practices initiated in the Salt Lake Valley spread to other portions of the state with the settlement of new areas.

The diversion and beneficial use of water to produce crops made the adoption of the appropriation doctrine a necessity to accomplish this settlement. The traditional riparian concept of water rights which existed in the East would have made the development of this area impossible since it would have prevented the full and complete utilization of Utah's limited water supply. Consequently, the riparian concept of water rights was rejected in favor of the appropriation doctrine.

Water Right Administration

The legislature has delegated to the State Engineer the responsibility for water right administration in Utah. The State Engineer's Office was created in 1897, but initially the State

Engineer was given only limited responsibility in the water rights field. However, his duties have been considerably expanded in subsequent years by the legislature. Under present statutes, the State Engineer has general administrative supervision of the waters of the state, including the measurement, appropriation, apportionment, and distribution thereof.

Early Appropriation Procedures

The early territorial legislatures in Utah recognized rights acquired by the application of water to a beneficial use and, during the ensuing years, various statutes were enacted to provide procedures for the acquisition of water rights. These early procedures included grants of water by county courts and a subsequent method which required the posting of notice with the county recorder of the intended appropriation. However, the principal manner by which water rights were acquired during this early period was by the diversion of the water from its natural channel and applying it to a recognized beneficial use. These early water rights have come to be known in Utah as "diligence rights."

In 1903 the legislature enacted a detailed water code which provided that rights to the use of surface water could only be acquired by the filing of an application to appropriate in the Office of the State Engineer. However, the owner of a diligence right, not otherwise of record, may file a diligence claim in the State Engineer's office. Once such a claim has been filed, the statute provides that it constitutes prima facie evidence of the water right.

Although the present procedure for acquiring rights to water apply equally to both surface and ground water, this has not always been the case in Utah. Ground water has had a somewhat different history. Ground water, flowing in what the Utah court has characterized as definite underground streams, and the underflow of surface streams have consistently been held to be subject to the appropriation doctrine. However, this was not the rule with respect to percolating waters. Until the early 1920's, percolating ground water was considered to belong to the owner of the soil as part of his ownership of the land. This concept was abandoned in favor of the doctrine of correlative rights which allowed each land owner to beneficially use percolating ground water in proportion to his surface ownership of land.

In 1935 the Utah Supreme Court abandoned the correlative rights doctrine when it ruled that percolating ground water was subject to the appropriation doctrine. That same year the Utah legislature provided that rights to ground water could only be acquired by filing an application to appropriate in the office of

the State Engineer. The only source of ground water which is still considered exempt from the appropriation doctrine is that ground water diffused and percolating through the soil near the surface which sustains beneficial plant life on the owner's land without artificial diversion and has no course traceable onto the lands of others. This water is considered part of the soil and not public property subject to appropriation. In effect, this is only diffused water in the soil and as a practical matter does not constitute a source of water which presents any significant problem in water right administration.

Current Appropriation Procedure

The basis of Utah's present day procedure for appropriating water was the act of 1903 which was subsequently revised and re-enacted into what is today a broad and comprehensive water code.

The Utah Supreme Court has upheld the constitutionality of Utah's present water right law, and declared that the State has the right to control the appropriation and distribution of the public waters within its boundaries.

The current Utah statutes provide that all waters in this state, whether above or under the ground, are public property and that rights to use the unappropriated waters can only be acquired by filing an application to appropriate. This statutory procedure is now the exclusive method of appropriating water in this state. Applications to appropriate are filed in the office of the State Engineer and unappropriated water may be acquired for any recognized beneficial use.

Upon receipt of an application, notice is published in the county where the point of diversion is located and protests against the application may be submitted within 30 days following the last publication date. If a protest is filed, the State Engineer conducts an informal hearing with the applicant and the protestant and receives whatever relevant evidence the parties desire to submit.

Before approving an application, the State Engineer must find that there is unappropriated water in the source that can be diverted without interfering with existing rights. He must also conclude that the application is engineeringly and economically feasible and that the application is not contrary to the general public welfare and is not filed for purposes of speculation and monopoly. As will be discussed in more detail later, the decision of the State Engineer is subject to appeal to the district court.

Once an application is approved the applicant is given a specific time within which to place the water to beneficial use and

submit a written proof of appropriation. An applicant may be granted additional time for completing construction of the works and applying the water to beneficial use upon a showing of diligence or a reasonable cause for delay. This statute allows the State Engineer to grant up to 50 years to accomplish this work. The Utah Supreme Court has ruled that in order for an applicant to be entitled to a further extension of time he must make a constant effort to accomplish his undertaking as is usual with men engaged in a like enterprise who desire a speedy accomplishment of their designs.

The question of due diligence has been one of great concern in the State of Utah in recent years because an applicant with an approved application who fails to place the water to beneficial use is tying up the water supply and precluding the full and complete utilization of this limited resource by others. Therefore, in recent years the State Engineer's office has required applicants with relatively small projects to complete construction of their works and place the water to beneficial use within a period of a few years. If this is not done, further extensions of time are denied and the application is lapsed. This program has resulted in clearing the State Engineer's records of many applications under which no development had taken place. However, as demands for water increase in the future it will undoubtedly become necessary to adopt an even more rigid policy on extension requests.

Once the water is placed to beneficial use the applicant submits proof of his appropriation and is issued a certificate of appropriation which is recorded in the County Recorder's Office. Thereafter, the only requirement is that there be a continued beneficial use of water in the manner provided for in the certificate.

Court Review of State Engineer's Decision

Any person aggrieved by a decision of the State Engineer may, within 60 days after notice of the decision, bring a civil action in the district court for a plenary review thereof. The practice and procedure in these actions and the same as in other equity cases. The hearing proceeds as a trial de novo with the district court reviewing the same issues which were ruled on by the State Engineer in the first instance. The decision of the district court is appealable to the Utah Supreme Court.

Those decisions of the State Engineer which are most often appealed are the result of this action either approving or rejecting a controversial application; however, on occasion appeals are also taken from his decision regulating water distribution matters. His decisions in water right adjudications are governed by a separate

section of the code and are discussed in a subsequent section of this report.

Change in the Exercise of a Water Right

The point of diversion, place, and nature of use of a water right may be changed under Utah statutory procedure. Such changes may be made either on a permanent basis or a temporary basis, the latter being limited to a period not to exceed one year. The approval or rejection of a change application depends on whether or not the proposed change will impair other vested rights. If the State Engineer determines that there will be an impairment, the change cannot be approved without the applicant compensating the owner of the right being affected. This applies to rights which have a priority junior to the right being changed as well as rights which have an earlier priority. However, if the change is approved, priority of the water right which is being moved is not affected by the change and the right retains its original priority date.

In a state such as Utah, where most of the water is appropriated, it is generally believed that a realistic and liberal policy on change applications is needed to allow continued development of the state. For example, in many areas of the state, new industrial needs can only be met by purchasing existing agricultural rights and changing these old rights to satisfy the new uses. Therefore, a liberal change policy, consistent with protection to other existing rights, is required to meet these new demands. Also, such a program will allow for the transfer of less efficient uses to more efficient uses of water. While Utah decisional law on this subject has generally been consistent with this philosophy, there are some decisions which seem to narrow the scope of change applications.

Exchanges of Water

The Utah water code also provides that upon application in writing and approval by the State Engineer a water user may turn his water into any existing natural channel, reservoir, or lake and take a like quantity of water above or below where this water was turned in, less the quantity lost by seepage and evaporation. Exchanges have proved to be a very useful tool in developing large water conservation projects which involve interbasin transfers of water.

Distribution of Water

The State Engineer has general administrative supervision of the distribution of the waters of the state. He may, after

consultation with the water users on a given source, appoint a commissioner who makes the actual distribution of the water to the various users. The salary and expenses of the commissioner are paid by the individual water users on a pro rata basis. To assist the commissioner in the distribution of water, the State Engineer may require users to install proper measuring devices and control structures. With certain exceptions, the State Engineer has supervision over the construction, maintenance, repair, and operation of dams to insure the safety of persons and to protect property.

The Engineer may determine whether an existing underground water supply is adequate for existing claims. If after proper notice and hearing he determines that there is an inadequate supply for all claims, he may distribute the water in accordance with the priority of the claims.

Adjudication of Water Rights

Utah has an integrated administrative-judicial proceedings for the determination of the rights to the use of any stream or water source in the state. Such an action can be initiated by the State Engineer upon petition of water users or the court can, in litigation involving water rights, order a general adjudication. Once a general adjudication proceeding has been initiated, the State Engineer undertakes a hydrographic survey of the source involved and receives water users claims from the various users. These claims stand in the place of pleadings, and issues may be framed thereon.

From these sources and other information gathered by him during his investigation, the State Engineer prepares a proposed determination of water rights. This document is mailed to the individual users and they have an opportunity to submit written protests to the district court if they disagree with the Engineer's proposals. Any protests which are submitted are tried before the district court with all of the interested parties present. The district court's ruling may be appealed to the Utah Supreme Court. If no protests are filed, the district court enters judgment in accordance with the proposed determination of water rights as submitted by the State Engineer. The Utah Supreme Court, in some relatively early cases, upheld the constitutionality of various aspects of this act.

The Nature of a Right Acquired

Under Utah law a water right is treated as a species of real property and is protected in the same manner as other real

property within the state. However, the holder of a water right does not have the same unconditional ownership of the water as is the case with land. Rather, it is the right to divert the corpus of the water; but the right is subject to the owner continuing his beneficial use of the water. Of course, the water user is also limited to the quantity of water provided for in his right and cannot exceed the period of use specified in the right. While a user under the appropriation doctrine is allowed to receive his entire supply before a junior appropriator is entitled to any water, Utah does have a statute which somewhat modifies this concept. In times of scarcity domestic use shall have priority over all other uses and agricultural use shall have preference over all uses except domestic. However, this statute has not ever really been implemented in Utah. This is so because of uncertainties concerning the definition of times of scarcity and also the question of whether a junior user would be required to compensate the holder of the prior right.

A water right in Utah is considered to be appurtenant to the land, but it may be sold and transferred independently of the land itself. However, if a deed transferring the real property is silent concerning water right, it is deemed that the water passes as an appurtenance with the property. This rule does not apply to water which is represented by shares of stock in an irrigation company. This water is transferred by transferring the shares of stock and these shares are not deemed to be appurtenant to the land.

One aspect of certain ground-water rights that has been of concern in Utah is the protection that is afforded to the means of diversion to users from artesian basins. Historically, under Utah law an appropriator receiving water by artesian flow has been entitled to have this hydrostatic pressure maintained as a part of the water right. Any subsequent appropriator who interferes with this means of diversion has been required to make a replacement of the water. It is generally believed by most of those associated with water development that this rule has undoubtedly restricted the full and complete development of Utah's artesian ground-water basins. However, in a very recent decision, the Utah Supreme Court has modified the rule stated above. The case involved a change of existing rights from several old wells into a single new well for more efficient use. In allowing this change the court concluded that a user from a ground-water basin does not have an absolute guarantee to hydrostatic pressure but must suffer some reasonable reduction in pressure in the interest of efficiency and beneficial use of this resource. It is believed that the so-called "rule of reason" will be a significant step forward in the development of Utah's ground-water law.

Loss of Water Rights

Perfected water rights in the State of Utah may be lost through either abandonment or statutory forfeiture. There are two separate and distinct legal concepts. A water right may be abandoned by failing to use the water, coupled with an intent to forsake or give up the right. Abandonment can occur without any particular lapse of time.

Statutory forfeiture is distinguished from abandonment in that the intent to give up the water right is immaterial. If a water user fails to use the right for a period of 5 years and does not request an extension of time within which to resume use of the water, the right is forfeited and reverts to the public. With the competition for water becoming more and more accelerated, this provision of the code will undoubtedly be of more and more concern in Utah.

Prior to 1939, a water right could also be lost by the adverse use of another party. This use had to be a continuous, uninterrupted, hostile, and adverse enjoyment of the water for a period of 7 years. However, the Utah Legislature in 1939 amended the water appropriation statute to prevent the acquisition of a water right by adverse use and this provision is still in effect in Utah today.

Preservation of Unappropriated Waters

For the purpose of preserving the surplus and unappropriated waters of any stream or other source of water supply for use by irrigation districts and organized agriculture users or for any use whatsoever, the Governor may suspend the right of the public to appropriate such surplus and unappropriated waters. This provision was invoked in the 1940's to preserve certain waters for the Central Utah Project. These waters were not restored until this project was authorized and moving ahead in 1964.

Waters which have been withdrawn may be restored to appropriation by proclamation of the Governor on recommendation of the State Engineer. Such proclamation is not effective until notice thereof has been published. After the first publication of notice in a newspaper of general circulation within the boundaries of the river system which has been withdrawn, applications may be deposited with the State Engineer. The State Engineer holds hearings on the applications which have been filed during the period of publication. The State Engineer fixes the order of the priority of such applications based on his determination of which applications are most conducive of the public good.

Administration

Division of Water Resources

The above discussion summarizes the Utah law of water rights and water right administration by the State Engineer. However, another important facet of Utah's water resource program relates to water conservation and development. At the state level this function is carried out by the Utah Division of Water Resources. The functions of this division include a program to finance the construction of water conservation and development projects selected by the Board of Water Resources. The Board of Water Resources is the policy making group within the Division of Water Resources. Under the provisions of this act, funds are made available to local sponsoring groups, usually a mutual irrigation company, who enter into a contract with the state and agree to repay the funds advanced from a revolving construction fund. During the period of the agreement the state takes and retains title to the project. This includes title to the water rights and the distribution system.

The Board of Water Resources also participates in any compact negotiation which involves Utah's interstate waters, and appoints individuals to represent the state on compact commissions where compacts have been signed and ratified. This is done in cooperation with the Governor and the Department of Natural Resources.

Perhaps one of the most significant assignments presently being carried out by this division is the formulation of the state-wide water plan. This responsibility was assigned to this agency approximately 6 years ago and a number of reports of a technical nature have been published by the division. However, the division is now in the process of formulating a plan which will discuss the possible alternative uses for Utah's remaining unappropriated water and will also deal with the question as to how the State of Utah can meet its future water needs.

Water Pollution Control Committee

With the increasing need for water pollution control and abatement, it has been imperative that the states have strong legislation in this area. In Utah the Water Pollution Control Committee has been delegated broad and comprehensive powers by the Utah Legislature to develop programs and institute actions for the prevention, control, and abatement of new or existing pollution of the waters of the state. This committee has authority to adopt standards of purity and quality for streams and to classify waters consistent with their most reasonable present and future uses. In order to abate water pollution, the committee is empowered to

conduct hearings and issue orders to violators requiring the abatement of existing pollution. The act provides that the committee may seek an injunction against violators and criminal sanctions are also provided for.

Department of Natural Resources

While this department does not directly administer any of Utah's water resource programs, the authority delegated to the department is briefly reviewed in this report because it does exercise certain administrative control of the water resource agencies within the department.

In 1967 the Utah Legislature created a Department of Natural Resources. Created within the Department of Natural Resources are the following boards: Board of Water Resources, Board of State Lands, Board of Oil and Gas Conservation, Board of Parks and Recreation, Board of Fish and Game, and Board of Big Game Control. Also within this department are the following divisions: Division of Water Resources, Division of Water Rights (State Engineer), Division of State Lands, Division of Oil and Gas Conservation, Division of Parks and Recreation, and Division of Fish and Game.

While it appears from the above listing that there are a large group of agencies within the Department of Natural Resources, this is not actually the case. Under this act, the division is given specific powers which are carried out and administered by the division director. The respective boards within these various divisions have been granted certain policy making powers which are independent of the authority granted the division director; but, nevertheless, the board constitutes a part of the division. For example, the Board of Water Resources is a part of the Division of Water Resources and is not a separate agency of state government.

The chief administrative officer of the Department of Natural Resources is the executive director who is appointed by the Governor with the advice and consent of the Senate. The executive director is responsible for the administration and supervision of the Department of Natural Resources and the effecting of coordination and cooperation among the boards and divisions, and approving the budget for each board and division.

Water Districts

The legislature of Utah has provided for the organization of irrigation districts, metropolitan districts, and water conservancy districts. These are three separate and distinct public agencies, each with defined powers and duties which are set forth

in separate acts but all have the common purpose of water development and utilization. Space does not permit a detailed review of the powers and duties of each of these organizations, however, a few general observations are pertinent.

Irrigation Districts

The primary purpose of an irrigation district is to provide a water supply for the irrigation of the lands located within the district. While some districts have been organized under this act, there has been no concerted effort to use this type of organization to solve water supply problems. One of the principal reasons for this appears to be that most of the organization of water users at the local level for irrigation purposes has been accomplished through mutual irrigation companies or water conservancy districts.

Water Conservancy Districts

Water conservancy districts are created to construct facilities for the general purpose of supplying water to the inhabitants of the district. Water can be developed and supplied for agricultural, industrial, municipal, and other recognized beneficial uses. Conservancy districts are usually the type of local organization created in Utah to enter into contracts with the Federal Government for the construction and repayment of costs on United States Bureau of Reclamation projects.

Metropolitan Districts

Metropolitan water districts, as the name implies, are primarily for the purpose of obtaining a water supply to meet the present and future demands of the municipality creating the district. This type of district has been effectively used by some of the larger cities in the state to secure water for future needs.

Flood Control

At the present time the responsibility for flood control measures is vested with the county commissioners of the various counties in the State of Utah. The statute grants the county commissioners authority to adopt and implement certain protective measures for flood control purposes.

LEGAL AND ADMINISTRATIVE BACKGROUND
STATE OF WASHINGTON



PREPARED BY
DEPARTMENT OF WATER RESOURCES
H. Maurice Ahlquist, Director

WASHINGTON

State LawHistorical Background

The Federal Government acquired what is now the northwestern part of the United States, including the lands which make up the State of Washington, in 1846. Seven years later, in 1853, Congress created the Territory of Washington through a division of Oregon Territory. In 1889, the State of Washington was admitted into the Union. This was approximately 45 years after the first diversions of water for agricultural irrigation uses were made by Christian missionaries at Whitman Mission near Walla Walla and in the Ahtanum Valley, a short distance from Yakima.

Between 1854 and 1889, the Territorial Legislature showed its interest in water resources through the enactment of a number of bills. These enactments covered various phases of water management from water quality control to licensing of ferries; from the building of bridges and wharves to the changing of stream channels; from the creation of water companies to giving abutting owners on water courses preference rights to the use of water therein and from the prevention of obstructions on streams to the establishment of appropriation rights.

Legislative History

The legislative history of the State of Washington reflects the transitions in administrative concepts which have occurred since territorial times in matters involving water and related land resources.

These changes developed along a common historical pattern: (1) Resource abundance with limited administration; (2) Increase in single-purpose uses with an increase in administration and regulation; (3) Intensified multipurpose uses followed by intensified administration and regulation which now include coordinated planning in order to achieve optimum sustained use and productivity for both water and related land resources.

Single-purpose resource conservation and protection programs initiated by the Territorial Legislature between 1853 and 1889 were supplanted by the State Legislature in establishing individual boards and authorities. Then came the era of departments and commissions to cope with problems of forest, land, and water use and development.

Early actions by the State Legislature also included delegation of authority to local units of government for specific matters of water and land management use.

Recent trends have been to expand the role of local units of government in matters of resource planning and development. Examples include authorization of metropolitan and regional units to facilitate the distribution of water supplies; the collection and treatment of wastes and comprehensive planning for water and land use and development.

The gradual legislative transition from the concepts of single-purpose use under a variety of State agencies and local administrative units has resulted in an overlapping of agencies concerned with the management, control, and utilization of water resources. During this time, the legislature and the courts have established or developed several doctrines relating to the establishment of rights to divert, withdraw, and make use of the public waters of the State.

In its initial session, the State Legislature passed its first laws relating to water rights by providing for the use of water for irrigation purposes. This was followed in 1891 by the enactment of the so-called "notice" system for appropriation of public waters. During the same period, the legislature enacted legislation authorizing the creation of irrigation districts. Within the first decade of the State's existence, legislation was also enacted providing for condemnation and appropriation of water for irrigation and mining purposes, and the protection of the quality of municipal water supply.

In the following 15 years, numerous bills relating to water management were enacted. Perhaps the most important State legislation relating to water rights law was enacted during this period, when, in 1917, a comprehensive surface "Water Code" was passed. With the passage of the Ground Water Act in 1945, which extended the permit procedure provided for in the 1917 Surface Water Code to ground waters, both surface and ground-water regulation of water rights came under the control of a single State agency, presently the Department of Water Resources.

During this same year, 1945, the legislature, for the first time, provided for a comprehensive water quality regulation program to be carried out by a State agency known as the Water Pollution Control Commission. The basic Act of 1945 was amended in 1955 to provide for so-called "permit" system of water quality regulation. The act was completely overhauled and updated by Chapter 13, Laws of 1967, which is discussed in a subsequent section.

Organic Act

The Territory of Washington was authorized and established by the Organic Act of March 2, 1853 (10 Stat. 192) by dividing the Oregon Territory along the mid-line of the Columbia River to the city of Walla Walla and then eastward at 46 degrees north latitude to the crest of the Rocky Mountains.

Enabling Act

On February 22, 1889, Congress enacted an Enabling Act to provide the means whereby the people of North and South Dakota, Montana, and Washington Territories could prepare constitutions and otherwise qualify their respective territories for admission to statehood (25 Stat. 676).

The President of the United States proclaimed Washington a state on November 11, 1889 (26 Stat. 10).

Constitution

The Constitution of the State of Washington was ratified by the people at a special election held on October 1, 1889. It became effective upon the proclamation of the President of the United States admitting the Territory of Washington to statehood, November 11, 1889 (Article 27, Section 16). Although the Constitution is relatively brief with respect to land and water resources, it did not in terms restrict the future development of our natural resources but left these matters to the judgment of future generations. The more important aspects of the Constitution for the purposes of this study are set out as follows:

Declaration of Rights

Eminent Domain - Public and Private Purposes The doctrine of eminent domain was recognized in Article I, Section 16. Private property may be taken for both private and public uses upon the payment of just compensation. The taking of private property by private persons is limited to private ways of necessity, drains, flumes, or ditches across the lands of others for agricultural, domestic, or sanitary purposes.

Whether a use be public or private is a judicial question without regard to any legislative assertion that the use be public. In this respect, the Constitution provides that the taking of private property by the state for land reclamation and settlement is in itself a public use per se.

Harbor Line Commission and Restraint on Disposition
Article XV, Section 1, provides for the creation of a Harbor Commission to establish harbor lines in the navigable waters of all harbors, estuaries, bays, and inlets within this state, whenever such navigable waters lie within or in front of the corporate limits of any city or within 1 mile thereof on either side.

The Harbor Line Commission may re-establish, change, or relocate harbor lines pursuant to such directions as may be given by the legislature. In State v. Savidge, 95 Wash. 240, 163 Pac. 738 (1917) it was held that Article XV of the Constitution applies to both tidal and nontidal navigable bodies of water.

The clarity of Section 1 was enhanced by a series of statutory definitions set out in RCW 79.04.020, 79.04.030 and 79.04.040.

School and Granted Lands When the State of Washington was admitted to statehood upon an equal footing with the original states (Enabling Act, 25 Stat. 676), it became possessed of a vast acreage of public lands estimated at more than 4 million acres. Some of this land was granted to it for schools and other public institutions (Enabling Act, 25 Stat. 676), and the balance consisting of the beds of tidal and nontidal navigable lakes and streams up to the ordinary high water line plus the outer tidelands extending 1 marine league off its shoreline.

The ownership of the State of Washington over the beds of navigable waters did not extend to tide and shorelands sold or conveyed by the Federal Government prior to statehood (Shively v. Bowlby, 152 U.S. 1 (1894)).

Declaration of State Ownership of Tidal Lands and the Beds of Fresh Water Navigable Streams and Lakes The State constitution asserts in Article XVII, Section 1, the ownership of the State of Washington to the beds and shores of all navigable waters in the state, up to and including the line of ordinary high tide, in tidal waters and up to the line of ordinary high water within the banks of all navigable rivers and lakes.

Disclaimer of Certain Lands In Article XVII, Section 2, the State of Washington disclaimed all title or ownership in or to all tide, swamp, or overflowed lands patented by the United States during territorial days provided such patents are not impeached for fraud.

Boundaries of the State of Washington Article XXIV, establishing the boundaries of the State of Washington in 1889, was amended by popular vote on November 4, 1958, to provide for their modification by appropriate interstate compacts approved by Congress. This provision has not been implemented to date. Hence, they remain as established in 1889.

Compact with the United States. Disclaimer of Title to Public or Indian Lands The people of Washington in solemn compact with the United States declared that, in adopting the constitution of the State of Washington, they would forever disclaim all right, title, or interest in the (1) unappropriated public lands lying within the boundaries of this state; (2) all lands lying within said limits owned or held by any Indian or Indian tribes. They also agreed that, until title thereto had been extinguished by the United States, such lands should be and remain subject to the disposition of the United States; and said Indian lands should remain under the absolute jurisdiction and control of the Congress of the United States.

State Cases and Statutes

Reflecting the various and drastic differences in the climatic conditions of the various parts of the state, the Water Law of the State of Washington is based upon the California or "Dual" system of water rights. This system represents an effort by the courts and legislature to adapt the principles of the Riparian and Appropriation doctrines to fit the local needs of the particular states involved.

While both doctrines relate to usufructuary rights, as distinguished from the ownership of the corpus of the water itself, the two doctrines represent vastly different approaches as to how the distribution of our public waters should be made.

The doctrine of riparian rights is based upon ownership of land contiguous to a natural stream or lake. Such rights only attach to lands abutting upon the waters of a non-navigable stream or lake. As between riparians, no right of priority to make a diversion exists as the rights of riparians are equal. The extent of a riparian's right to use water is based upon its reasonableness; that is, under the Washington variation, a riparian may make maximum use of waters subject to the limitation that his use cannot unreasonably interfere with similar uses by others. The use must be reasonable in relation to the needs of others.

The distinguishing feature of the prior appropriation doctrine, rather than being based on the land-to-water proximity

element of riparianism, is related to a time element. Consequently, he who is "first in time is first in right," i.e., he who first appropriates water to a beneficial use acquires the paramount right. Under this doctrine, no distinction is made between use on riparian and nonriparian lands. A prior appropriation has a right to exclusive use of water free from all interference, subject only to the limitation that no waters can be withdrawn which cannot be put to a beneficial use.

As pointed out, these conflicting water rights doctrines have existed since the beginning of the state's history. In claiming usufructuary rights to water in Washington, a water user must rely on one of the various methods of establishing rights under the prior appropriation doctrine or the riparian doctrine. The only apparent exception thereto relates to claims based on rights held as a successor in title to rights reserved for Indians by the Federal Government and their successors in interest.

At present the permit system is the only method under State law for establishing a right to divert either public surface or ground waters. This mandatory permit is an evolution in the prior appropriation doctrine. It requires that, before the waters of this state may be put to a beneficial use, permission for such intended use must be first obtained from the Director of Water Resources.

Even at this late date, the conflicting policies of the two doctrines have not been resolved. The lack of guidance from the courts and the legislature as to how to integrate these opposing doctrines has given rise to a most difficult regulation problem. While the legislature has provided a special statutory procedure (RCW 90.03.110) whereby water rights on a specific water source may be adjudicated one as against another, for various reasons most of the State's waters have not been adjudicated.

Recent Development in the Law of Water Resources

Registration or Relinquishment of Water Rights - Adverse Possession of Water Rights Abolished Many of the conflicts which arise in the control, management, and inventorying of water rights under the riparian and appropriation doctrines are in the process of being resolved. The Washington Legislature moved forward in this direction when it enacted House Bill 310, now known as Chapter 284, Laws of 1969, First Extraordinary Session.

The act provides that all beneficial users of ground or surface water without permits must file a statement of claim with the Director of Water Resources on or before June 30, 1974. The

statement must identify the water right claimed by quantity, location of diversion, purpose and place of use, and date of first diversion. The filing of the statement of claim is not of itself an adjudication of the water right.

Only those persons who have obtained their water rights under the statutory permit system set out in the Washington Revised Code for surface, ground, or storage waters and those holding rights determined through adjudication proceedings are excepted from the operation of the act. All others including the State of Washington and the United States of America are specifically included under the statute.

Failure to comply with the act will work a waiver and relinquishment of the water right to the State of Washington where it will become again available for appropriation under the Code. The publication of notice required by the act appears sufficient to avoid hardship or any misunderstanding as to the intent and coverage of the legislation.

Chapter 233, Laws of 1967, authorizes the Supervisor (now Director) of Water Resources to declare a water right relinquished upon due notice to and hearing of the interested parties.

The Director may also invoke the provisions of the act when any person abandons his water right or voluntarily fails, without sufficient cause, to beneficially use all or any part of the water thereof, for a period of 5 years after the effective date of the act. The effect of the Director's order terminating such water right is to cause the water affected thereby to revert to the State where it again becomes subject to appropriation under the permit system. Appeal to the superior court by the aggrieved parties is provided for.

At Section 20 of the Act, the acquisition of water rights by adverse possession or prescription is prohibited. This action is necessary to maintain a public record and inventory of the ownership of all outstanding water rights.

With the Registry of Claim Statements plus the records of all permits and certificates outstanding, a rather accurate inventory of the quantity of water being put to beneficial uses in Washington may be obtained. There remains the necessity of making a physical inventory of the water resources of the State. With the aid of the two inventories, the physical, less the inventory of the amount already appropriated from the water sources of the State, should give a fair indication of the amount of water available for appropriation.

Seashore Conservation Areas The 1967 Legislature also created seashore conservation areas along the Pacific coastline from Cape Disappointment at the mouth of the Columbia River to the Straits of Juan de Fuca, omitting all Indian Reservations. The reserved area includes the land between the present line of ordinary high tide and the line of extreme low tide. These coastal beaches are reserved for all forms of outdoor recreation under the jurisdiction of the State Parks and Recreation Commission (Chapter 120, Laws of 1967).

The Parks and Recreation Commission was selected by the legislature (Chapter 96 Extraordinary Session, Laws of 1967) to perform all the powers, functions, and duties in tideland management previously exercised by the Department of Fisheries or its Director on certain shellfish reserves for recreation use. Specifically, reference is made to Toandos Peninsula, Shine, Mud Bay, Lopez Island, Spencer Spit, and Lilliwaup tidelands in Chapter 96. Except for designation of closed areas which might otherwise interfere with recreational use, seasons and limits relating to the taking of shellfish are still established by the Department of Fisheries in these lands.

Primitive Outdoor Recreation Facilities In Chapter 64 Extraordinary Session, Laws of 1967, the legislature authorized the Department of Natural Resources to construct, operate, and maintain primitive outdoor recreational facilities after review with the Interagency Committee on Outdoor Recreation. The Department may also acquire or trade lands, provide access roads, and receive Federal funds in the development of recreational areas.

Bond Issue for Green Belt Areas Through passage of Chapter 126 Extraordinary Session, Laws of 1967, the legislature authorized general obligation bonds to the sum of \$40 million to secure and develop outdoor recreational areas and facilities in this state and in part pay for Green Belt areas. This act was adopted by the people of the state at a general election held in November 1968. This is the State of Washington's answer to the need and demand for Green Belt areas.

San Juan National Historic Park The State of Washington donated 120 acres of land to the United States for the use of the United States in creating the San Juan National Historic Park (Chapter 94, Laws of 1967).

State Departments and Agencies

Department of Agriculture

Origin and Background The Department of Agriculture was established by the State Legislature in 1913. The enabling legislation brought together a number of boards and commissions servicing segments of agriculture and operating independently. Since that time, the Department's responsibilities have been broadened, particularly in areas of consumer and public protection such as milk, meat and food inspection, and agricultural chemicals use. Traditionally, the Department's programs have been referenced to service to the agricultural industry and consumer protection, rather than to education, research and development, which are considered to be the role of the State University at Pullman.

Purpose and General Responsibility The Department is organized in the following seven divisions: General Administration; Dairy, Food, and Eggs; Animal Industry; Grain and Chemicals; Marketing; Plant Industry; and Regulatory.

The Department provides numerous services for all segments of the State's agriculture and, where required by law, regulates certain agricultural operations.

In the agricultural field, these responsibilities include marketing information and research; statistical reports; animal and plant disease and eradication; inspection and grading of many commodities; and regulation of livestock brands, livestock markets, dealers in farm products, and sellers and users of pesticides.

The Department's consumer protection programs assure consumers of wholesome and high quality foods and include surveillance of many food products to assure that they meet prescribed standards and to detect and eliminate chemical residues, adulterants, and harmful additives.

The Department has been delegated authority to meet new problems and conditions such as those created by the ever-increasing use of agricultural chemicals in the production and processing of food and to provide needed services to agriculture such as plant disease quarantines, cooperative animal disease eradication programs, and certification of disease-free planting stocks.

Policy Department policies are directed toward assisting the State's agricultural community to improve and expand by

providing the necessary services and regulation, and to assure the public of wholesome and high quality food and other agricultural products.

Organization and Programs The Director serves as a member of the Pollution Control Commission and the Governor's Advisory Council on Nuclear Energy and Radiation, and works closely with agricultural organizations on the development of legislation to enhance the industry's growth. This division also is involved in problems affecting agriculture such as taxation, zoning, and freight rates.

Grain and Chemical Division This Division includes a Pesticide Branch which is responsible for registering all agricultural pesticides, approving formulations and labeled uses, and regulating the sale of hazardous materials.

This branch also is responsible for examining and licensing pesticide applicators and operators and approving their equipment, including the public and private applicators and operators who apply weedicides on ditch banks. The branch promulgates and enforces orders relative to the application of 2,4-D and other weedicides and defoliants, the application of insecticides for the purpose of protecting pollinating insects, and the application of all pesticides for the purpose of protecting the public health and welfare.

Marketing Division This Division administers a program of general market development in cooperation with the Federal Government, private industry, and various commodity groups. The latter include 11 commodity commissions organized under State enabling legislation to assess specific growers for funds for respective research and market development. The Division's program is geared to solve marketing problems, expand present markets, and develop new markets, both domestically and abroad, for the widely diversified agriculture of the state. The program includes provision of a market news service, compilation and dissemination of statistics, and cooperation in studies and efforts designed to improve the competitive position of the industry, as by securing reduced surface and air freight rates on both imports and exports for such items as feed grains, and products such as potatoes, grains, and fruits and vegetables which are sent to distant markets.

The goal of this program is to improve the net income of the state's producers. (For basic references, see RCW Chapter 43.23.)

Department of Commerce and Economic Development

Origin and Background Chapter 215 of the Laws of 1957, providing for establishment of the Department of Commerce and Economic Development, contains this expression of public policy:

"It is hereby declared to be the public policy of the legislature of the State of Washington to continue, and to accelerate the orderly growth of the economy of the State; not only to preserve, but also to increase the economic well-being of its citizens and its commerce: The legislature thereby determines that it is in the public interest, for the public good and the general welfare of the citizens of the State to establish a department of commerce and economic development. Through research and promotion the department shall foster the most desirable growth and diversifications of industry and commerce possible, and the attraction of visitors to the State."

The Department as it is now constituted consists of a Tourist Promotion Division, an Industrial Development Division, a Business Economic Research Division, a Foreign Trade Division, a Business and Fiscal Division, and an Office of Nuclear Energy Development.

Purpose and General Responsibility, Policy, and Organization and Programs

Tourist Promotion Division

1. The general responsibility of the Tourist Promotion Division is to promote tourist travel from outside the State of Washington; to encourage the State as a "tourist destination." In keeping with the general purpose and because water is a common denominator to all parts of the State of Washington, utilization of water recreation potentials is a dominant role in such promotion.

2. As policy, such promotion includes accent on boating, fishing, ferry trips, beachcombing, and related activities in the salt water areas. These are definitely highlighted in advertising, publicity, and presentations in the areas East and South where water recreation of this type is a "luxury."

As a secondary activity, Tourist Promotion Division is active in programs of assistance and advice in the development and use of water-oriented areas both in public and private domain to enhance the entire State for tourist travel. In this regard the Division is concerned with the development of marinas, parks, private

and public beaches and adjacent camping or resort areas; establishment of correlary facilities (restaurants, motels) taking advantage of scenic resource areas, charter-boat rentals, charter tours, marine service facilities, water-oriented recreation, sailing, racing, water skiing, skin diving, etc. Most recently in cooperation with the Washington State Ports Association and Pacific Marine Industries, the Division prepared a joint publication relating to salt water marinas and boating facilities extending through lower Puget Sound and the Straits of Juan de Fuca. The Division carries listings of State-owned marine parks and other water-oriented facilities in the Outdoor Recreation Guide along with similar listings in various related publications.

Industrial Development Division

1. Purpose and general responsibilities are:
 - a. To achieve an industrial climate in the state conducive to industrial growth and serve as a catalyst for local community and private industrial development efforts.
 - b. To expand industrial job opportunities and a rate of industrial growth commensurate with the needs of a growing labor force.
2. General policy is to:
 - a. Cooperate with all development agencies, provide comprehensive service in connection with industrial plant location inquiries and studies.
 - b. Formulate plans for effectively providing industrial research in the state.
 - c. Effectively represent the interests of business and industry in relations with State government.
 - d. Obtain increased participation of localities, business and industry in promoting industrial development.
3. Organization and programs:
 - a. Participate in planning for the establishment of a World Trade Center.
 - b. Work with localities and associations in establishing and developing water-oriented industrial sites.

- c. Maintain on a current basis a statewide inventory of industrial sites.
- d. Maintain, in cooperation with the Foreign Trade Division, a Register of Washington Industries as a reference file for export possibilities.
- e. Utilizing State developed and other research data, assist in the identification of potentials and needs of local industry.

Business and Economic Research Division

- 1. Purpose and general responsibilities are:
 - a. To provide research services, studies, and data pertinent to the development of the economy of the state.
 - b. To undertake market feasibility studies on existing resources, products, and by products which are or could be developed in the state.
- 2. General policy is to:
 - a. Provide research studies and analyses to meet planning needs.
 - b. Furnish on a continuing basis statistical data essential to overall economic development programming.
 - c. Provide economic and market research necessary to increase raw material utilization.
 - d. Study and analyze the State's travel industry.
- 3. Organization and programs:
 - a. Participate on economics technical committee for subregion comprehensive river basin planning.
 - b. Conduct basic studies to outline and summarize the State's economic structure and economic base.
 - c. Furnish research services to EDA and local "701" programs in the state.
 - d. Research and prepare economic data for localities.
 - e. Publish updated Washington State Manufacturer's Directory.

Foreign Trade Division

1. Purpose and general responsibilities are:
 - a. Promotion of trade and commerce in and through the State of Washington.
 - b. Rendering services to the public through documentation, evaluation, and analysis of foreign and domestic trade markets, as well as through dissemination of the information which will help promote foreign trade.
 - c. Creation and maintenance of viable environment for foreign trade.
2. General policy:
 - a. Trade Promotion. The principal emphasis will be:
 - (1) to make Washington industries become more aware of the values and importance of foreign trade;
 - (2) to develop contacts both within this state and abroad in an effort to create and stimulate interest in export-import agreements; (3) to encourage the Washington industries for diversification and for manufacturing more foreign-oriented products; and
 - (4) to redirect the attention of the foreign buyers to the potentials of Washington products and of the trade with the State--these with the ultimate goals to enlarge the markets of Washington products and in general to enhance the position of the State as the center of trade activities.
 - b. Services. Projects described under this category are primarily concerned with the development of mechanisms and facilities within the division to assist the traders on the conduct of harmonious and efficient international business transactions and the preparations. With the support of such mechanisms the division will act as an effective intermediary between and an advisor to the importer-exporter segment of this State and of foreign countries. The division will also provide answering services to various trade-related inquiries.
 - c. Maintenance of viable environment for foreign trade. The nature and the meaning of this program is self-explanatory. The division will actively participate in those programs which will yield good climate for trade activities in this State and in foreign lands.

To perform this duty, the following specific activities may be undertaken:

- (1) Recommendation and support of legislation at Federal and State levels which will favor the free trade between the United States and foreign countries.
- (2) Support of those organizations which are dedicated to the programs of trade promotion.
- (3) Communication and contacts with the governmental officials and business representatives of foreign countries in order to cultivate good will, to deepen understanding, and to further the trade activities.
- (4) Participation in various educational programs designed to increase understanding for the importance of trade.
- (5) Participation in support of the programs of the Washington International Trade Fair, Washington ports activities, and other related activities.

3. Organization and programs:

- a. Promote trade and commerce through Washington State ports and harbors.
- b. Maintain statistics on traffic and goods volumes moving through Washington ports.
- c. Encourage port facility development to encourage and accommodate increased traffic movement.
- d. Participate in the development and planning of a World Trade Center.

Office of Nuclear Energy Development

Origin and Background The Office of Nuclear Energy Development was established in 1965 as a division of the Department of Commerce and Economic Development (RCW 43.31.040).

Purpose and Scope It was the intent of the legislature in creating the Office of Nuclear Energy Development that the State, through the Department of Commerce and Economic Development, should:

1. Encourage, promote, and cooperate in the development and use of nuclear energy for peaceful and productive purposes.

2. Translate the State's nuclear resources and position in the nuclear energy field from an exclusive Federal base to one with a healthy private enterprise component.
3. Stimulate the nuclear potentials within the state by catalyzing the interest of industry, agriculture, and education around the State's nuclear resources and interests.
4. Acquire and operate property and facilities for the primary purpose of maintaining title or interest as the catalytic agent for activity and direct operation of nuclear energy facilities and by-products thereof by others.
5. Encourage the transfer of property and facilities to others who will directly operate nuclear facilities and processes, ensuring perpetual surveillance by the State where required by agreement with the Federal Government. (Chapter 10, Section 1, Laws of 1965).

The Office of Nuclear Energy Development was empowered and authorized to discharge the following duties through the Department of Commerce and Economic Development.

1. To advise the governor and the legislature with regard to the status of nuclear energy research, development, and education, and to make recommendations to the governor and the legislature designed to assure increasing progress in this field within the state.
2. To advise and assist the governor and the legislature in developing and promoting a State policy for nuclear energy research, development, and education.
3. To sponsor or conduct studies, collect, and disseminate information, and issue periodic reports with regard to nuclear energy research, development, and education and proposals for further progress in the field of nuclear energy, and the power to acquire land and facilities for such purposes is specifically delegated to the department.
4. To foster and support research and education relating to nuclear energy through contracts or other appropriate means of assistance.
5. To gather, maintain, and disseminate available information concerning appropriate sites throughout the state and the advantage of locating nuclear energy industries within the state.

6. To keep the public informed with respect to nuclear energy development within the state and the activities of the state relating thereto.

Other powers and duties are entrusted to the Department of Commerce and Economic Development, operating through the Office of Nuclear Energy Development. They include:

1. Expenditure of such State funds as may be appropriated by the legislature in order to acquire, develop, and operate land and facilities which the director believes will foster the development of the State's nuclear economic potential. Such acquisition may be by lease, dedication, purchase, or other arrangement: Provided however, that nothing herein shall be deemed to authorize the state to acquire nuclear facilities or property to engage in competition with organizations or persons.
2. Leasing, subleasing, or sale of real and personal properties to public or private bodies on a competitive basis and at a fair market value when the director believes that such transactions will foster the development of the State's nuclear economic potential.
3. Entering into contracts with State and private institutions within the state for the carrying out of the basic research in such uses of nuclear energy as may be helpful to the economic development of the state.
4. Assuring the maintenance of such insurance coverage by State licensees, lessees, or sublessees as will adequately, in the opinion of the director, protect the citizens of the State of Washington against nuclear incidents that may occur on privately or State controlled nuclear facilities.
5. Assuming responsibility for perpetual surveillance and/or maintenance of radioactive materials held for waste management purposes at any publicly or privately operated facility located within the state, in the event the parties operating such facilities abandon said responsibility and whenever the Federal Government or any of its agencies has not assumed said responsibility.
6. Entering into an agreement with the Federal Government or any of its authorized agencies to assume perpetual surveillance and/or maintenance of lands leased or purchased from the Federal Government or any of its authorized agencies and used as a burial or storage site for radioactive wastes.

Policy Working through the Department of Commerce and Economic Development under the guidance of the Governor's Advisory Council on Nuclear Energy and Radiation, its policy is to promote the health and economic well-being of the people of this State and Nation through the peaceful use of nuclear energy by means of research, education, and cooperation with the public, educational institutions, private industry, other states, and the United States.

Organization and Program The Executive Director of the Office of Nuclear Energy Development is also the nuclear advisor to the Governor and the legislature, as well as the Executive Secretary of the Governor's Advisory Council on Nuclear Energy and Radiation.

The Council, working with the Office of Nuclear Energy Development, has a master plan consisting of more than 17 major programs designed to propel the State of Washington into the nuclear age. The tasks thus developed have been assigned to the Office of Nuclear Energy Development for performance. They begin with the assessment and maintenance of an inventory of nuclear energy resources and related research capabilities within the state. A Nuclear Task Force composed of State agency representatives, designed to communicate with and ascertain the needs of industry and the people of the State of Washington, has been established. Special attention has been devoted to cooperation with local, State, regional, Federal, national, and international agencies and organizations in the development and exchange of ideas and information with respect to nuclear energy.

In order to implement and supplement this program, the Executive Director also serves as the State's representative on nuclear matters to the Council of State Governments, National Governors' Conference, Western Governors' Conference, Committee on Western Interstate Nuclear Compact, and is a member of the Western Interstate Nuclear Compact Committee. He also provides the necessary liaison between industry, educational institutions, the public and professional societies concerned with nuclear development. The Executive Director also serves as the Staff Director of the Washington State Legislature's Joint Committee on Nuclear Energy, thereby providing a forum wherein all State agencies may meet to discuss solutions to problems concerning nuclear energy. (For basic reference see Chapter 43.31, RCW, particularly Sections 43.31.010, .050, .060, .070, .200, .210, and .280 and 70.98.040.)

Joint Committee on Nuclear Energy Chapter 113 Extraordinary Session, Laws of 1967, created the Joint Committee on Nuclear Energy whose membership is determined as follows: four members from the Senate and four from the House of Representatives--two from each major political party. The committee is authorized to make continuing studies of the problems relating to the

development, use, and control of nuclear energy for peaceful purposes. Liaison is to be maintained with the Governor's Advisory Council on Nuclear Energy and Radiation, as well as with the State Office of Nuclear Energy Development, whose duties are set out under State Administrative Agencies in this study. It may work with any other public or private organization or individuals interested in the development of nuclear energy.

Department of Fisheries

Origin and Background The Department of Fisheries is headed by a director appointed by the Governor of the State for a non-specified time.

The director has two assistant directors and seven division supervisors, who direct the technical activities of the Department.

The Department of Fisheries has gone through several periods of legislative reorganization in its more than 60 years of evolution from the four-man agency established by the State's first legislature in 1890. The agency was administered by the Fish Commissioner and was located at Vancouver, Washington, which was then central to the main salmon fishing area. The first major change occurred in 1921, when the legislature abolished the old 1890 Fish Commission and replaced it with a Department of Fisheries and Game governed by a nonsalaried three-man fisheries board and a salaried director.

The Board operated in Bellingham at this time when the Puget Sound salmon fishery became dominant in the State's salmon industry.

This endured until 1929, when the Board was eliminated, and its regulatory powers were given to the Director of Fisheries and Game. The final change grew from a 1932 initiative which separated food and game fish, and created a Department of Fisheries under an appointive director and a Department of Game under a six-man commission. At this time, the Department operated from Seattle, as the home center of the fisheries industry and the shipping point for fisheries products into and out of the state. Since 1963, Department headquarters have been in Olympia.

During the past 29 years, the commercial and sport fisheries have been regulated under a broad fisheries code, which authorizes the Department of Fisheries to set seasons and gear restrictions, to construct necessary facilities, and to regulate activities in conjunction with other agencies.

Purpose and General Responsibility The State Department of Fisheries has jurisdiction over the food fish and shellfish resources of the State, protecting, propagating, and managing food fish and shellfish resources in waters of the State and offshore in such a manner as to achieve optimum utilization without impairment of stocks to reproduce at optimum levels.

Statutes allow the director wide powers in regulating commercial and salt water sport fisheries. He is further empowered to acquire land and water rights, construct facilities, regulate water usage in conjunction with the Departments of Water Resources and Game, and to conduct research on food fish and shellfish. The director (with the Director of Game) is empowered to recommend to the Director of Water Resources, the water levels and flows in lakes and streams for fishery purposes, excluding, however, existing hydropower or water storage operations.

Policy The programs of the Department of Fisheries are guided by the concept of resource management to achieve optimum sustained production of fish and shellfish products.

Supporting policies provide for the maintenance of adequate stream flows and the maintenance of water, channel, and streambank habitats which are compatible with fishery resource needs. The use of water for fishery propagation and enhancement is recognized as a beneficial use.

It is also the policy of the Department to conduct basic and applied research in all phases of fishery management to increase the natural productivity of these resources.

Organization and Programs The functional divisions of the Department include:

- Engineering and Construction
- Hatchery Operations
- Stream Improvement and Hydraulics
- Research

Brief descriptions of these divisions and activities as they relate to the fresh and marine water resources of the State are as follows:

The Engineering and Construction Division is responsible for design, construction, and maintenance of facilities required by the Department to sustain food fish and shellfish resources. Projects include fish farms, laboratories, experimental research, and patrol and hatchery facilities. Major maintenance

is provided for hatcheries, fishways, and fish farms. Other projects include fish hauling, fishway operations, and fishway maintenance.

Hatchery Operations include supplementation, rehabilitation, and creation of fish runs by hatching and rearing juvenile salmon in 25 hatcheries and 27 fish farms. Effort is continuous toward disease control and better hatchery techniques. Expansion of this program is necessary to offset the continued loss of natural environment.

The Stream Improvement Division examines and approves plans for water-use projects. Recommendations to the Department of Water Resources concerning water right applications and hydraulic projects are made jointly with the Department of Game to provide maximum protection to the fishery resources. The division maintains a stream channel clearance program to allow for natural production of salmon and maintains screen structures at major diversion intakes to protect young salmon. Hydraulic permit specifications are issued (with the Department of Game) for any work relating to waterways or streambed work.

The Research Program provides technical data for management and conservation of fish and shellfish resources, their optimum yield, and sustained production. Its main function is to develop and recommend fishery regulation and management techniques for both fish and shellfish resources. This division is participating directly in river basin study activities, and is providing an inventory of species and distribution of food fisheries for all subregions of the State as well as the needs and means to satisfy needs pertaining to water and fish requirements. In addition, an economic survey of food fish resources is being developed. (For basic references, see RCW Chapters 43.17, 75.04, 79.20, and 90.48.)

Department of Game

Origin and background The State Game Commission and the State Game Department were created by legislative action in 1933. The Commission consists of six nonsalaried members, three of whom are from west of the Cascades and three from east of the Cascades. No two members, however, may be residents of the same county. The members are appointed by the Governor for 6-year terms on a staggered basis, two being appointed every 2 years. They hold regular meetings on the first Monday of January, April, July, and October, and special meetings at such times as called by the Chairman or by a two-thirds majority of the members.

The Director of Game is appointed by the Game Commission

and exercises all powers and performs all duties prescribed by law and by rules and regulations of the Commission. He has charge and general supervision of the Department of Game.

Purpose and General Responsibility The Commission is charged with preserving, protecting, and perpetuating the game animals, fur-bearing animals, game birds, nongame birds, song birds, and game fish of the State. Their regulations are developed to insure that these wild animals, wild birds, and game fish are not taken at such times or places, by such means, in such manner, or in such quantities as will impair the supply.

Policy It is the policy of the Game Commission to sustain the populations of game fish, game animals, and game birds at a level which will provide the maximum harvest and recreational use by the people of the State. Nongame animals and birds are also protected to insure their availability for the recreational demands of the people.

To maintain game fish and wildlife populations at a level to provide maximum harvest and recreational potential, the Game Commission must, therefore, be concerned with the protection of available habitat for these wildlife resources. Land is acquired and developed for wildlife use. Water flows must be maintained at levels consistent with game fish needs, and natural stream and streambank habitat must be maintained. Protective measures are incorporated into all water-use project permits to minimize losses to these populations.

Organization and Programs The Department is organized into nine functioning divisions to accomplish the objectives delegated by the legislature to the Commission. The fish and wildlife management divisions of the Department are as follows:

1. Fishery Management
2. Game Management
3. Fur and Damage

These three divisions are responsible for artificial propagation, regulation of seasons, and damage control measures required to sustain maximum numbers of game fish, wildlife, and fur bearers to provide recreational satisfaction to the people of the State.

The following divisions support the three management divisions in fulfilling the objectives of the Game Commission:

1. Applied Research
2. Enforcement
3. Facilitating Services
4. Land Management
5. Licenses
6. Special Services

The Applied Research Division, as a support division within the Department, provides the game fish and wildlife data necessary to river basin planning activities. Water and land habitat requirements for maintaining present and future fish and wildlife populations, as well as economic evaluations, are also a part of this program.

(For basic references, see RCW Chapters 77.04 and 77.12.)

Department of Health

Origin and Background The provision for the establishment of a Department of Health is contained in the original State constitution. The State Board of Health was established by laws of 1891 and 1901 for rule-making purposes and policy, and its responsibilities have not been materially changed since, except as new programs have been delegated by the legislature.

These early laws were primarily concerned with such matters as quarantine and disposal of deceased persons, important public health concerns in 1900, but of relatively little concern today.

The problem of water pollution and related public health effects of water were recognized in 1909 legislation. It was declared a gross misdemeanor to "deposit or suffer to be deposited in any spring, well, stream, river, or lake, the water of which is or may be used for drinking purposes, . . . any matter or thing whatever, dangerous or deleterious to health, or any matter or thing which may or could pollute the waters" ^{1/}

It was not until the 1930's, however, that an ongoing program was developed to protect the quality of public water supplies and to begin a program of sewage treatment. Programs have since been added in many other areas of the environment--sanitary control over food and shellfish, housing, schools, institutions, parks, swimming pools, air pollution, radiation, solid waste, and others.

^{1/} RCW 70.54.020 (L. '09, P.979, S. 291).

Purpose and General Responsibility The State Board of Health was given authority (RCW 43.20.050) in "all matters relating to the preservation of the life and health of the people of the State." The Board was authorized to make rules and regulations to carry out its responsibility. Regulations have been adopted over the years in 34 different areas, ranging from public water supplies to hospitals, from swimming pools to wiping rags. Some of these areas have been designated by special legislation. Regulations of the Board are administered by the State Department of Health in cooperation with city, county, and district health departments.

The State Department of Health carries the major responsibility of some programs, such as hospital licensing, public sewage disposal, public water supply, whereas the local health departments carry the major role in others, with supervision and assistance by the State. In general, it is a cooperative effort by both, following the regulations of the State Board of health.

Policy Most health programs, including those in environmental health, are carried out in close cooperation with local health departments.

The degree of participation by local departments is in most cases limited only by available staff time and budget, rarely by statute. With the water supply program, activities calling for engineering competence, such as review of plans are carried out at State level. Bacteriological analysis is done by both State and local departments, depending on lab facilities available locally. Surveillance is performed by both levels of government, with the State generally responsible for larger systems where technical problems are more complex. It is anticipated that local health departments will become more active in the public water supply program as they are able and willing.

The public sewage disposal program functions somewhat differently. To better coordinate the program with other State and Federal agencies, this is administered primarily by the State Health Department, with some assistance in surveillance, sampling, consultation, etc., done locally. Farm and home facilities not connected to a sewer system are regulated by local health departments, except where a surface discharge is involved.

Organization and Programs The public water supply and public sewage disposal programs are administered by the Sanitary Engineering Section through offices in Spokane, Seattle, and Olympia. The Air Quality and Radiation Control Programs are administered from offices in Seattle. The shellfish and solid waste programs are directed from the Olympia office.

Municipal Water Supply Program Periodic surveys and inventories are made of municipal water supply systems. Bacteriological samples are analyzed by local health department laboratories, and by the State Health Department when no local laboratory is available. Routine chemical analyses are made by the State Health Department of public water supplies.

Recommendations for improvements are made to upgrade public water supplies and considerable liaison is maintained with municipal officials for this purpose. Operator training and certification programs are carried out, together with specific technical assistance, to provide more effective and efficient operation of water supply facilities.

Engineering reports, plans, and specifications for improvements are reviewed and approved. These plans are kept on file for future reference.

Municipal Sewage Disposal Program Periodic surveys are made of municipal sewage treatment and collection facilities; physical data are recorded; recommendations for improvements are made to municipal officials; plans and specifications for new construction are reviewed and approved; technical assistance is provided in the field and training and certification programs are being carried on.

Bacteriological analyses are made, primarily by local health departments, to assure adequate effluent disinfection, especially where public health may be affected such as use of the receiving water for water supply, recreation, or shellfish culture.

Shellfish Program Shellfish growing and harvesting areas are inspected and certified by the department. Continual surveillance is maintained over actual and potential sources of sewage contamination and the effect of these on shellfish is evaluated. An inspection program of shellfish processing plants is also carried out.

Air Pollution and Radiation The air quality control program includes air quality surveys to describe the scope of the problem in a given area, and the provision of assistance on development of control programs by local government.

Countywide air pollution control districts may be established, in accordance with local decision and need. Action by the 1967 legislature greatly strengthened the concept of local control and also automatically established the district comprising Snohomish, King, and Pierce Counties, as well as Yakima and Spokane Counties. Other districts in the state are in process of study or formation, notably in Western Washington where all counties except Kitsap are involved in air pollution control efforts.

A State program to monitor radiation in the environment has been maintained for many years. The scope of this program is continually increasing. These State environmental monitoring programs are cooperative with and supplemental to those of the Atomic Energy Commission.

Solid Waste The State Department of Health has been designated by the Governor as the agency to administer this program. A Federal grant has been received to set up the program and make a statewide survey of the problem. Solid waste regulations are being drafted.

(For basic references, see Article XX, State Constitution; RCW Chapters 18.20, 18.45, 18.46, 18.51, 43.20, 69.06, 69.30, and 70.)

Clean Air Act Chapter 238 of the Laws of 1967 provided the State of Washington with a comprehensive Clean Air Act under the supervision of the Department of Health. The act of 1967 was, in fact, an amendment to and an improvement over the original Air Pollution Act of 1957.

The act provides for an Air Pollution Control Board whose membership of nine is widely dispersed throughout the state, thus assuring a broad area of representation. The State Director of Health shall be an ex officio member with vote and shall act as chairman of the State Board. The Governor is authorized to appoint one member from the public; one member to be alternately appointed from the faculty of the University of Washington or Washington State University with the advice of the president thereof. Another member shall be appointed as representative of labor; another member shall be the mayor or a member of the governing body or other official of an incorporated city or town. Another member shall be a member of the board of county commissioners; another to represent agriculture. Two members are to represent the industries most concerned with air pollution in the state.

The act provides for the division of the state into five areas, each with its regional air pollution control authorities. This should provide flexibility and the adaptation of the act to the specific needs of each area. Each regional authority is empowered to prepare and develop a comprehensive plan for the prevention, abatement, and control of air pollution within its jurisdiction. In addition, the Air Commission, and the various regional authorities, can compel attendance of witnesses, administer oaths, take testimony, and issue orders to implement its findings.

Department of Highways

Origin and Background The Department of Highways is an agency established by legislative action and governed by a five-member commission appointed by the Governor and ratified by the Senate. The Department is administered by a Director of Highways appointed by the Highway Commission. Construction, maintenance, operation, and capital outlay budgets are subject to legislative approval on a biennial basis.

Purpose and General Responsibility The Department is responsible for the construction, maintenance, and operation of the State system of streets and highways. It is financed entirely from State motor vehicle funds, which by statute can only be used for highway purposes. These funds are supplemented with Federal-aid matching funds, subject to the State's conformance to policies administered by the U.S.D.T., Bureau of Public Roads.

Policy It is the Commission's policy on all highway projects involving water resources to coordinate their activities by direct contact with the respective State and Federal agencies having jurisdiction thereto.

Whenever any person or corporation desires to build a water resource project which requires the relocation, reconstruction, or alteration of an existing state, county, or permanent highway or road, the State Highway Commission may, whenever the Director of Water Resources deems the project structure necessary and so certifies to the Highway Commission, grant or reject the application to so rebuild or reconstruct the road facility, the same to be substantially of the same type and grade of construction as that of the road, street, or highway to be overflowed or inundated. However, no such right shall be granted until it shall be determined in a condemnation suit that such use is a public use and the full amount of damages determined; and a bond filed in twice the amount of the judgment conditioned upon faithful compliance with all the terms of the judgment with regard to the alteration, relocation, and maintenance of the facility for 18 months after completion and opening to public use.

In some instances, the Department has been known to elect by agreement of the parties to have the facility constructed to a higher standard; and, if so, the Department bears the proportionate increased cost as a betterment. Conversely, in those instances when a new highway project conflicts with existing water resource facilities, the Department of Highways bears the cost of relocation, reconstruction or alterations as may be required to maintain its functional status.

Department of Natural Resources

Origin and Background When Washington became a state in 1889, the Federal Government granted some 3.1 million acres of land to the State for support of public institutions of the State. Later, some 600,000 acres of county trust land accumulated by the counties were placed under the management of the Department of Natural Resources, and several thousand miles of State-owned tide and shorelands were added to the responsibility of the Department. These lands now provide a large share of the funds that support the State's public schools, colleges, universities, the capitol grounds and buildings, as well as institutions and certain county governments.

The Department of Natural Resources is administered by the Commissioner of Public Lands, a position created by the State constitution.

Recognizing the need for fire protection, the 1903 Legislature added the duty of State Fire Warden to the constitutional duties of the Commissioner of Public Lands.

In 1905, the legislature repealed the foregoing act and enacted the Forest Protection Law. This created a State Board of Forest Commissioners to be appointed by the Governor and to serve without pay. The Commissioner of Public Lands was indicated to be ex officio member of the Board of Commissioners.

Among others who subsequently shared the management of State-owned lands were Division of Forestry in the Department of Conservation and Development, Board of State Land Commissioners, Sustained Yield Forestry Committees, State Capitol Committee, Director of Licenses, Secretary of State, and the State Tax Commission.

Purpose and General Responsibility The 1957 Legislature consolidated land management duties into one responsible agency--the Department of Natural Resources--created to more efficiently manage the State-owned land and its natural resources to minimize management costs and maximize income to the State.

Inherent to this management are related responsibilities--protection of watersheds and water yield; preservation of range and forest lands from fire, insects, disease and erosion; and perpetuation of the State's heritage of outdoor resources for both intrinsic and esthetic values.

The 1957 consolidation placed about 4 million acres of land under the management of the Department of Natural Resources. The

land is classified as 2 million acres of timber land, 1 million acres of forested grazing land, 750,000 acres of grazing land (rangeland), and 150,000 acres of agricultural land. In addition, 5,000 miles of tidelands, shoreline, and beds of navigable rivers were placed under resource management of the new department. Another important responsibility assigned by the act of 1957 was the administration of State reserved gas, oil, and mineral rights on 1 million acres.

The act of 1957 also created the Board of Natural Resources, naming five ex officio members to compose the Board: The Governor; the Superintendent of Public Instruction; the Dean of the College of Forestry, University of Washington; the Director of the Institute of Agricultural Sciences, Washington State University; and the Commissioner of Public Lands.

The duties of the Board are "to establish policies to insure that the acquisition, management, and disposition of all lands and resources within the Department's jurisdiction are based on sound principles designed to achieve the maximum effective development and use of such lands"

The Board also serves as a "Board of Appraisers" which is provided for in the State constitution.

The prime governmental duty of the Department is to protect the 12-1/4 million acres of State and private forest lands from damage by fire, insects, and disease.

Other responsibilities are:

1. To maintain timber growth and production for all State and private forest lands under the Forest Practices Act.
2. To cooperate with the Soil Conservation Service, U.S.D.A., in flood control and erosion control on some 1,600,000 acres of State and private land.
3. To give assistance on over 4 million acres of privately owned forest lands.
4. To maintain a central information service which includes cataloging and reference service for surveys and maps for the State.
5. To police transportation of logs in navigable waters of Western Washington.
6. Rehabilitation of men and forests through the Department's State honor camps and youth camps.

In 1967, with dissolution of the Department of Conservation, the delegated responsibilities of the Divisions of Mines and Geology of that agency were transferred to the Department of Natural Resources. This authority relates to the promotion and utilization of the State's mineral resources. It further serves as a clearing house of information on the geology and mineral resources of the State. Known mineral deposits are evaluated through field and office research; and, through geologic mapping, the basic information is provided that is needed in the search for new ore deposits. The Division collects statistics concerning the occurrence and production of economically important minerals; publishes bulletins on the geology, mineral resources, and mineral statistics of the State; maintains a collection of rock and mineral samples (at least 5,200 specimens) with special emphasis on those of economic importance; maintains a collection (approximately 14,000) of library books, reports, records, and maps pertaining to geology, mineralogy, and mining, with special emphasis on material appurtenant to Washington, and makes them available to the public for reference. The Division also identifies samples of ores and minerals sent in by the public.

The Division is accumulating oil-well cores and cuttings and slides of microscopic-size fossils which are extensively used by oil companies in exploring both in the state, and as far as 50 miles offshore. The Division issues permits and regulates the drilling for oil and gas and the development of underground gas storage areas.

Geologic maps are made and mineral resources and geologic reports are published and sold.

In 1964, the Division made a small start on a new program--geochemical prospecting, in which thousands of stream-sediment samples are collected and analyzed in the search for ore bodies and mineralized areas.

Policy The Department of Natural Resources is guided by the concepts of multiple-use of all State-owned lands. It operates under its constitutional mandate to achieve the maximum income for the trust to which the land is assigned, seeking to achieve the highest and best use of all land for the people of the State. All policy decisions and all activities of the Department of Natural Resources are guided by the State constitution which states that "all the public lands granted to the State are held in trust for all the People."

Organization and Programs Department programs are administered through eight separate divisions whose titles are indicative of their duties:

| | |
|------------------------|----------------------|
| Forest Land Management | Land Management |
| Timber Sales | Fire Control |
| Civil Engineering | Forest Engineering |
| Operations | Technical Services |
| | (includes Inventory) |

For administrative purposes, the State is divided into six supervisory areas, each with a Field Supervisor in charge. These areas are further divided into 23 Districts, each headed by a District Administrator and his staff.

The duties of the Department are divided into two major categories: Proprietary and Governmental.

The primary proprietary responsibility is generating maximum income from the management of State lands consistent with accepted land and resource conservation practices.

In the Fifth Biennium, the period from July 1, 1964, to June 30, 1966, the Department of Natural Resources experienced a record \$38 million income from the State and the various other land trusts. The major share--\$33.8 million--was from timber sales. Agricultural sharecrop of State lands yielded \$1.4 million.

Other proprietary functions include:

- Construction of forest access roads.
- Reforestation of State timbercrop lands.
- Provisions for public recreational uses of State lands.
- Forest inventory of State-owned lands.
- Survey of State property lines.
- Land exchange and right-of-way.

The Department of Natural Resources is involved in programs relating to public water supplies in the region.

Under its administration are more than 58,335 acres of State land within 12 major municipal watersheds of the Northwest.

To protect the quality and yield of these waters originating on State land, which serve the people of the State, the Department is developing precautionary practices and directives in its land management programs.

Control clauses are included in State timber sale contracts to promote protection for the stream or body of water involved and

to minimize erosion or damage to the soil-retaining vegetation. Buffer strips of trees are left along streams in logging operations. Where this is not feasible, the State replants for stream protection.

The Department of Natural Resources maintains an atlas indicating permits issued by the Department of Water Resources to water users contiguous to State-owned land. This enables Department of Natural Resources' personnel to locate such water users and notify them of any pending disturbance that may temporarily occur from logging operations, and insures time for adequate consideration of protection measures.

The Department worked with the Pollution Control Commission to assemble a static display of water turbidity that is used to inform Department employees of the problem.

The Department cooperates closely with the Department of Fisheries by notifying Fisheries of all cutting permits on State and privately owned lands. When timber sales are made, the Department of Natural Resources mails to the purchaser a packet from the Department of Fisheries containing applications for work permits that relate to changes in or on a stream.

The Department of Natural Resources maintains like cooperative liaison with the Division of Water Management, Department of Water Resources. Similarly, requests by sand and gravel lease operators to perform work that may affect a stream or shoreline are distributed to other resource management agencies by the Department of Natural Resources for consideration and comment.

In conjunction with Washington State University, the Department of Natural Resources gives its personnel special training in watershed management procedures.

The Department of Natural Resources complies with the Watershed Protection and Flood Prevention Act (Public Law 566) which stipulates that, when requested to do so, the Department of Natural Resources will give technical assistance in watershed planning for private lands. Examples of technical assistance given by a Department of Natural Resources' Farm Forester on a PL 566 watershed plan are readily available for the record.

The State first received assistance from the Federal Government in the work of forest fire protection through enactment of the Weeks Law (March 1, 1911). This allotted a small amount of money to the state for protection of forested areas outside of national forest boundaries.

The purpose of the Weeks Law was to preserve navigable streams through forest protection by the State and private owners.

The law states "the protection must be confined to the forested watersheds of navigable streams."

The framework of Federal-State cooperation established by the Weeks Law was strengthened by the Clarke-McNary Act of 1924 and subsequent legislation developed primarily for financing State fire control.

Currently the Department of Natural Resources receives approximately 16 percent of its annual State fire-control costs under the Clarke-McNary Act. Financing is also given to the State's reforestation program under cooperation with the act.

The results of fire research have had an increasing impact since the early 1930's. Organized research began in a small way in the 1920's and was increased by the McSweeney-McNary Forest Research Act of 1928.

The Department of Natural Resources cooperates in fire research carried out by the Forest Service, U.S.D.A.

The increasing use of aerial fire detection methods demonstrated by the Forest Service, U.S.D.A., is also being developed by the Department of Natural Resources.

Beginning with the use of air patrol after lightning storms, the Department of Natural Resources increased its aerial fire detection systems to cover about a million acres in 1965.

For the 1967 fire season 6.5 million acres of State and private land were included under the DNR aerial fire patrol system.

Included within the boundaries of Department-managed lands are over 12,000 surface acres of water in rivers, streams, and lakes. Consistent with the purposes for which these lands are held, and, in compliance with the Statewide Outdoor Recreation and Open Space Plan, the Department, under provisions of Chapter 64, Extraordinary Session 1967, is authorized to construct, operate, and maintain primitive outdoor recreational facilities and may acquire and develop public access to lands under the jurisdiction of the Department that are suitable for public outdoor recreation.

These State lands are located in each county of the state. Many specific areas have potential for outdoor recreational development because of their proximity to urban areas or to natural and scenic environments. Because it is necessary to meet income responsibilities to the educational, institutional and municipal trust beneficiaries of these lands, the Department executes leases in its own name for a period of 50 years, dedicating recreation

sites for public recreation use. These leases are financed through State and Federal recreation funds.

These State lands have a dispersed ownership pattern, wide range of climate, and a favorable vegetative cover, extending from the Pacific Ocean beaches and the rain forest of the Olympic Peninsula to the semiarid, open, pine and grazing lands of Eastern Washington. State lands are located at all elevations ranging from sea level to nearly 8,000 feet on the eastern Cascade slope in North Central Washington.

Large areas of State-owned tidelands are located in the San Juan Island area and on the Straits of Juan de Fuca. Relatively large, solid blocks (over 5,000 acres) of State-owned uplands are strategically located within 1 to 2 hours travel time from each of the major urban population centers of the state. Smaller areas of uplands and tide or shorelands are located within 15 minutes to 1 hour travel time from nearly every city and community of the state.

In 1963 State lands managed by the department provided an estimated 4 million visitor-days of recreational use for residents of Washington, and some three-quarter million visitor-days for use of out-of-state visitors. Picnicking and fishing were the two leading recreational activities and represented nearly 60 percent of the total visits. These and the many other recreational uses of State lands are expected to increase by at least 10 percent each year.

Eighty-three small recreation areas, averaging five-family camp and picnic units in size, have been established and maintained as a part of the department's forest-fire prevention program. The total area developed for public use is approximately 400 acres, or an average of less than 5 acres for each recreational area. Facilities at these and other department recreational areas are grossly inadequate to accommodate present and expected use.

The Department of Natural Resources proposed 6-year outdoor recreation plan includes the following seven basic elements:

1. An expanded program of small-sized (10 to 30 family units) recreation areas on State-owned lands throughout the state.
2. A new program of acquiring and developing public access and waterfront areas adjacent to the most desirable tide and shorelands owned by the state.
3. A program for developing recreation facilities as well as extensive road and trail systems in multiple-use

areas. These areas, currently six in number vary in size from 6,500 acres to over 100,000 acres of department-managed lands each in a single block located near urbanized areas of the State of Washington.

4. A program of special-use camp and picnic areas. The first phase of the special-use camp program calls for the construction throughout the state, near urban centers, of four primitive camp sites designed for use and enjoyment by the physically handicapped and the mentally retarded.
5. Continued cooperation with educational and outdoor recreational oriented private, Federal, State, and local public organizations.
6. Increased emphasis toward development and operation of recreational facilities on State lands by private enterprise.
7. It is the policy of the Department of Natural Resources that its efforts in recreation shall not duplicate or compete with the facilities constructed by other agencies of government at Federal, State, or local levels.

As previously noted, the Department of Natural Resources manages nearly 5,000 miles of tide and shorelands. These are not included in the present recreation-potential inventory. It will be necessary, in order to fully develop a plan for water-oriented facilities on these lands, to conduct a complete study of potential recreation sites.

(For basic reference see RCW Chapters 43.30, 76, and 79.)

Department of Water Resources

Origin and Background The State of Washington entered a new era of water resource management in 1967 when the legislature passed Senate Bill 143, which created a Department of Water Resources. This action abolished the Department of Conservation, its statutory divisions and the Columbia Basin Commission and the Weather Modification Board. All duties and responsibilities of the abolished agencies were transferred to the newly created Department of Water Resources, the functions of which will be carried out within three statutory divisions--Adjudication, Water Management, and Planning and Development. At this time, the functions and personnel of Mines and Geology were transferred to the Department of Natural Resources.

This 1967 action followed the long history of conservation programs initiated by the Territorial Legislature and continued by earlier State legislative actions establishing a number of individual boards and authorities to cope with problems of water, forest, and land use and development.

With passage of the Administrative Code of 1921, five divisions were initially established within the then newly created Department of Conservation and Development--Forestry, Geology, Reclamation, Hydraulics, and Columbia Basin Survey--to carry out the functions of seven abolished agencies or offices, the State Forester and Fire Warden, State Board of Forest Commissioners, the State Geologist, Board of Geological Survey, State Reclamation Board, State Hydraulic Engineer's office, and the Columbia Basin Survey Commission.

In 1935, extensive flood control legislation was enacted, the administration of which was placed under the Division of Hydraulics. At the same time, a Mines and Mining Act was enacted, the administration of which devolved upon the Director of Conservation and Development. Because of similarities and overlap, the Division of Mines and Division of Geology were consolidated in 1945 by executive order.

The Extra Session of 1933 and regular session of 1935 created a State Planning Council and Progress Commission, respectively, both of which were abolished in 1945, the duties being taken over by a newly created Division of Progress and Industry within the Department of Conservation and Development.

In 1951, the legislature again changed the complexion of the Department by creating a Division of Flood Control and assigning to that office the prior duties and responsibilities of this field from the Hydraulics Division. At the same time, the name of this Division of Hydraulics was changed to the Division of Water Resources.

More abrupt changes occurred in 1957 when the Department of Natural Resources and Department of Commerce and Economic Development were created. The Division of Forestry and Division of Progress and Industry were abolished and the powers and duties, as well as personnel, were transferred to these new departments. Simultaneously, the Washington State Power Commission was abolished and its functions were assumed by a newly created Division of Power Resources, together with the addition of the Weather Modification Board, within the Department of Conservation, (the Development portion of the name being omitted by statutory amendment).

The third Columbia Basin Commission was established in 1943, after abolishment of the second in 1937. Administrative

responsibilities were attached to the department inasmuch as the Director is the statutory chairman.

The full cycle of evolution was reached when the 1967 legislature passed Senate Bill 143, creating the new Department of Water Resources.

Policies The department is guided by policies which provide for the wise use of water and related land resources under conservation practices which assure for optimum, sustained, multipurpose use of these natural resources.

Organization and Programs The water-related functions in the department can be broken down into: adjudication, water management, and planning and development; these being the titles of the water-oriented divisions of the Department of Water Resources.

Water Resources Advisory Council To provide advice and guidance to the Director of Water Resources and to better coordinate the department with other State agencies having responsibilities affecting the State's water resources, there is created a water resources advisory council. By statute the advisory council is composed of 11 members to be selected as follows:

1. The Director of the Water Pollution Control Commission
2. The Director of the Department of Health
3. The Director of the Department of Fisheries
4. The Director of the Department of Water Resources
5. The Director of the Department of Game
6. Six other persons representing the public interests who shall be selected by the governor and serve continuously during the full length of the appointing governor's term or terms of office, and until a replacement appointment has been made. Should any vacancy occur under this subsection, a replacement appointment for the balance of the term shall be made by the governor within 90 days.

The chairman of the council is the Director of the Department of Water Resources, who conducts the council's meetings in accordance with such rules as the council may prescribe. Complete minutes are taken at each regular meeting, and copies thereof are available on request to any interested person.

The advisory council meets quarterly at a date, time, and place of its choice, and also at such other times as designated by the Director.

It is the duty of the members of the advisory council to advise the director on each of the following subjects:

1. Rules and regulations proposed for promulgation by the director pursuant to Chapter 34.04 RCW.
2. Proposed positions to be taken by the department on behalf of the State before interstate and Federal agencies or Federal legislative bodies on matters relating to or affecting the development, use, conservation or preservation of the water resources of the State.
3. Any comprehensive water resources plan or policy proposed for adoption by the department as a State plan for water resources.
4. Any legislation proposed by the department with regard to water resources and its management.
5. Any other matters relating to the administration and management of water resources as requested by the director.

Each member of the council submits to the director in writing his individual views within such time as the director prescribes and, in performing its duties, the council may conduct such public hearings and make such investigations as it deems necessary. The director shall include in his annual report to the governor a summary of the advice rendered by the council.

Division of Adjudications The primary function of this division is to investigate and act upon petitions received requesting an adjudication of claims to divert or withdraw public surface or ground waters of the State, or to initiate an adjudication proceeding when such action is in the public interest. A further function assigned to this division resulted from passage of the Registration and Relinquishment Bill--Chapter 233, Laws of 1967. Under the provisions of this act a hearing shall be conducted when it appears that a water right may be subject to relinquishment by virtue of nonuse without sufficient cause. Such hearings are conducted through this division in the manner prescribed by law upon request through the Division of Water management.

Division of Water Management The primary function of this division includes processing all surface and ground water applications and the issuance of permits and certificates of water right under provisions of the State's water code. In addition, field regulation of diversion or withdrawal devolves upon this division. For purposes of efficiency in operation administration,

the State has been subdivided into water management districts, each under the supervision of a district engineer or hydrologist. The districts, in turn, have been subdivided into water-master districts where needed to optimize manpower use in field regulation or rapid settlement of disputes that might arise between water users.

In addition, this division is responsible for carrying out the registration functions required under Chapter 284, Laws of 1969--The Registration Act, and Chapter 233, Laws of 1967--The Relinquishment Bill.

Division of Planning and Development This division has been assigned most of the functions of the former divisions of flood control, reclamation and power resources of the Department of Conservation, plus functions of the abolished Weather Modification Board and the Columbia Basin Commission.

For purposes of administration and consolidation, the division has been sectionalized as follows:

Engineering Section--Functions of this section involve river basin planning studies and coordination of inputs from other Federal, State, or local cooperating agencies; coordination of river basin plan formulation and analysis and approval of engineering plans and specifications for flood control, reclamation, power, municipal and industrial or recreation facilities or hydraulic structures to assure structural integrity and compatibility with river basin plans.

Basic Data Section--Functions of this section involve analysis and study of hydrography, ground water hydrology, and hydrometeorology of the State. This also includes cooperative studies with Geological Survey, snow survey programs, and weather modification research projects.

Operations Section--Primary functions of this section involve liaison between landowners or water users and assistance in forming diking, drainage, flood control, irrigation or reclamation districts. A further duty includes the investigation, study, and recommendation of financial assistance to qualified subdivisions of State government from the State Flood Control Maintenance Fund or the Reclamation Revolving Fund.

Section staff also makes periodic inspections of hydraulic projects under construction wherein State funds have been allocated from reclamation or flood control sources; and performs scheduled inspections of structures or projects covered by flood control zone permits.

Additional duties and responsibilities directed to the Department by the 1967 legislature include:

1. Representing the State at, and fully participating in, the activities of any basin or regional commission, interagency committee, or another joint interstate or Federal-State agency, committee or commission, or publicly financed entity in the planning, development, administration, management, conservation or preservation of the water resources of the State.
2. Preparation of views and recommendations of the State of Washington on any project, plan or program relating to the planning, development, administration, management, conservation, and preservation of any waters located in or affecting the State of Washington, including any Federal permit or license proposal, and appearance on behalf of, and presentation of such views and recommendations of the State at any proceeding.
3. Cooperation, assistance, advice, and coordination of plans with the Federal Government and its officers and agencies, and service as a State liaison agency with the Federal Government in matters relating to the use, conservation, preservation, quality, disposal or control of water and activities related thereto.
4. Authority to apply for, accept, administer, and expend gifts and loans from the Federal Government or any other entity to carry out the purposes of this act, and make contracts and do such other acts as are necessary insofar as they are not inconsistent with other provisions hereof.
5. The development and maintenance of a coordinated and comprehensive State water and water resources related development plan, and adoption, with regard to such plan, of such policies as are necessary to insure that the waters of the State are used, conserved, and preserved for the best interest of the State. There shall be included in the objectives a statement of the recommended means of accomplishing these objectives. To the extent the director deems desirable, the plan shall integrate into the State plan, the plans, programs, reports, research and studies of other State agencies.

(For basic references, see RCW Chapters 43.21, 43.37, 43.49, 43.51, 43.92, 78.52, 79.08, 80.40, 90.03-90.44, 90.48, and 91.21. Also Titles 85, 86.87, and 89 RCW. Further Chapters 81, 233, and 242, Laws of 1967.)

Water Resource Policy

Preamble

Recognizing that the State of Washington is favored with clean and abundant water resources and that this resource is vital to the health, welfare, and economic well-being of the citizens of the State, and, further, recognizing the obligation of the State to wisely use and properly manage this resource in a manner serving the best interest of all the people, IT IS DECLARED TO BE THE PUBLIC POLICY OF THE STATE OF WASHINGTON:

Objective

To achieve sound and coordinated resource management practices; to give complete consideration to the protection and preservation for optimum use of Washington State waters--atmospheric, surface and ground, both marine and fresh--consistent with the health, enjoyment, safety, economic and general welfare of all the people of the State; to promote efficient use of water; and to minimize conflicts of water use.

Responsibility

That the Executive Branch of government of the State of Washington, as the agents of its people, shall be responsible for execution of this policy, consistent with the intent of the legislature, incorporated in the laws of the State as these relate to the conservation, management, and perpetuation of the water resources in the best public interest.

Jurisdiction

That jurisdiction of the waters of the State of Washington shall be retained and protected by the state to meet the present and future demands of its citizens, and maximum effort will be directed to the development of interstate and international waters for the benefit of the State and the region.

That this policy, and such regulations and requirements relating therefor to water quality and quantity shall be equally applicable to all individuals, public, and private entities.

Uses

That the beneficial uses of the waters of the State of Washington shall include, but not be limited to, potable water supplies, propagation of wildlife, fish, shellfish, and other aquatic life, recreation and esthetic values, irrigation and other agricultural needs, industrial water supplies, navigation, and generation of electric power. In some instances, the discharge of treated wastes into waterways may be permitted, provided that treatment is sufficient to prevent water-quality impairment and protect all water uses.

Quantity

To provide for the conservation and efficient utilization of surface and ground-water resources by storage, recycling, recharge, reduction in transmission and evaporation losses and rehabilitation of used waters; and for the augmentation of existing supplies through research and development of techniques in weather modification and desalinization.

Quality

To protect and preserve the high quality of Washington waters; to require preventive or remedial action by those responsible for pollution or other acts resulting in significant changes detrimental to quality; and to require that any wastes amenable to treatment or control must be treated or controlled prior to discharge into any waterway.

Prevention and Reduction of Adverse Influences

To prevent and reduce all undesirable land and water management practices and influences which may damage, deplete, waste or interfere with the supply of water and its uses, to maintain surveillance thereof, and to that end:

1. Control rapid and excessive runoff, unwarranted restrictions to streamflow, erosion or siltation, excessive temperatures; and correct undesirable chemical, biological, and other physical water conditions.
2. Reduce waste, correct excessive allocations of water by establishing current and reasonable standards for water use, and recover water quantity from abandoned or abusively used water rights when such is in the public interest.

Allocation

To encourage and give precedence to coordinated comprehensive water planning and development for the widest range of uses consistent with public interest. Toward this end, planning shall be long-range in nature, yet flexible enough to meet current and changing requirements.

The State shall determine and maintain a current assessment of the productive potential and capacity of its water resources as they may affect this basic water policy, and shall base withdrawals allocations, and uses on the determined needs and capabilities of the water source.

Cooperative Studies and Research

To coordinate and encourage public and private participation in basic surveys, research studies, plans and investigations as are necessary for the determination of quantity and quality of Washington waters and the current and future needs.

Coordination

To coordinate activities of all state, local, and private interests involved in water resource planning, use, or management; and to cooperate in the coordinated planning efforts of Federal, interstate, and international agencies assigned such responsibility as these affect the water and related land resources of Washington.

Participation

To recognize the need for state participation in water resource project costs where benefits derived are commensurate with state needs and interests.

Legislative Cooperation

To keep the legislature advised of the status of water resources planning and development, and to encourage the legislature to enact such new legislation and modify such existing statutes as may be necessary to implement this policy and provide adequate appropriation of funds to accomplish the objectives thereof.

To assist the Department of Water Resources, the Water Resources Advisory Council adopted the above policy in September 1968. Formulation and rules or regulations by the department with

respect to planning and implementation are expected to fall within the framework or guidelines of this statement.

Planning and Community Affairs Agency, Office of the Governor

Origin and Background Comprehensive planning as a State function began with the enactment of Chapter 54, Laws of 1933, creating the Washington State Planning Council, consisting of nine members appointed by the Governor.

Section 2 specified the duties and functions as follows:

"In order that the people of the State of Washington shall realize the greatest possible benefit from the natural, agricultural, industrial and other resources of the state, including (a) (b) communication and transportation facilities, (c) fisheries, (d) forests, (e) industrial and commercial establishments, (f) lands, (g) mines and minerals, (h) rivers and harbors, (i) wild life and recreational facilities, (j) water sheds furnishing water for irrigation and domestic use, the council shall have power and it shall be its duty:

- (1) To make inquiries, investigations and surveys concerning the resources of all sections of the state.
- (2) To assemble and analyze the data thus obtained, and to formulate plans for the conservation of such resources and the planned systematic utilization and development thereof.
- (3) To make recommendations, from time to time, as to the best methods of such conservation, utilization and development.
- (4) To cooperate with the United States, other states or territories and their agencies, and the departments of the State of Washington and all other public agencies of this state in such planning, conservation, utilization and development of resources"

The Planning Council, together with the Washington State Progress Commission which was created in 1937 to plan and promote tourism in the state, was abolished in 1945 and all functions and duties transferred to a newly created Division of Progress and Industry within the Department of Conservation and Development.

With the creation of the Department of Commerce and Economic Development in 1957, the Progress Division was abolished and its

responsibilities transferred to the new department. In addition, responsibility for local planning assistance (cities and counties) was assigned to the Department of Commerce and Economic Development. The Department's planning responsibilities were enlarged during the 1963 legislative session with authority being provided for statewide comprehensive planning and coordination of State agencies. These responsibilities have been carried out by the Local Affairs Division of the Department.

Chapter 74 RCW of the Laws of 1967 provided for the establishment of the Planning and Community Affairs Agency within the Office of the Governor. After July 1, 1967, all planning responsibilities previously assigned to the Department of Commerce and Economic Development and the additional responsibilities set forth in the 1967 legislation are to be carried out by the Planning and Community Affairs Agency. The bill creating the planning agency contains the following expression of legislative intent:

"The Legislature finds that (1) the rapid growth being experienced by many communities within the State presents new and significant problems for governmental units in providing the necessary public services and in planning and developing desirable living and working areas; (2) the full and effective use of the many programs of the federal government affecting community development necessitates full cooperation and coordination of existing State and local governmental agencies; (3) the coordination of existing State activities which affect the communities of the State requires the establishment of machinery within State government to administer new and existing programs to meet these problems; (4) it is the urgent responsibility of the State to assist communities in meeting these problems in whatever way possible including technical and financial assistance."

Purpose and General Responsibility The agency is designed to strengthen the planning, programming, and management functions of the Governor within the State government and will provide a more effective means of coordination of State services to local areas. More specifically, the agency is authorized to:

1. Identify long-range goals for the State and translate these goals into a state comprehensive plan.
2. Provide the organizational means for coordination of more specific plans and programs of the various State agencies.

3. Integrate planning operationally into the State's programming and budgeting system.
4. Provide coordination of State services to local areas.
5. Integrate State plans and programs with those of local governments, the Federal Government, and with the private sector.
6. Administer planning and community affairs activities under State and Federal programs.
7. Recommend governmental organizations, functions, and programs designed to improve effectiveness and economies in governmental services.
8. Make population determinations, forecasts, and analysis.
9. Disseminate information on Federal and State aid programs and other information essential for public and private decision making.

In addition to the administrative personnel, the agency is composed of three divisions--State Planning, Community Affairs, and Population and Research. The individual division responsibilities are as follows:

1. State Planning Division Has primary responsibility for the preparation of the State comprehensive plan and for provision of coordination and assistance to departmental planning and fiscal programming. The division will provide special planning assistance to the Governor, the legislature, and other State agencies as necessary. The division is also concerned with interstate planning efforts.
2. Community Affairs Division Provides primary field liaison for all activities of the agency. It is responsible for integrating and coordinating local, State, and Federal plans and programs at the local area. The division has a primary responsibility for encouraging and assisting comprehensive planning and service programs of counties, cities, and regions within the State through the use of financial, technical, research, educational, and informational assistance.
3. Population and Research Division Provides basic data required for the agencies of State government to carry out their operating plans and programs. As successor to the Washington State Census Board, the division

makes annual population determinations of all cities and towns within the State, forecasts of State population and school enrollments, and other determinations and analyses as required by law. The division also serves as a clearing house of information, data, and other materials for State and local government; also develops information on Federal and State aid programs.

Organization and Programs Specific programs relating to subregional water and related land studies are:

1. Participation in appropriate River Basin Commission and task force technical committees.
2. Administer local and regional "701" programs throughout the state.
3. Review and make recommendations concerning a comprehensive State water plan or any amendment thereto being considered by local and regional agencies.
4. Review and make recommendations concerning all proposals for the location of capital improvements by any State agency which may occur within any city or other urbanized area.
5. Provide official State population enumerations and estimates as may be required by law.
6. Represent the State on municipal annexation review boards.
7. Provide consultation on proposed subdivision regulations.
8. Provide and administer financial and technical assistance to other State agencies, and local jurisdictions and agencies for public works projects and service programs.

(For basic references, see Chapter 74, Laws of 1967.)

Note: As a result of legislation during the 1969 session of the Washington State Legislature, portions of the responsibilities of the Planning and Community Affairs Agency were transferred to the new Office of Program Planning and Fiscal Management.

Washington State Canal Commission

Origin and Background The Washington State Legislature created the Washington State Canal Commission as it is presently constituted by legislative act in the 1965 session.

"There is hereby created a canal commission of the State of Washington, which shall be composed of five members appointed by the Governor and confirmed by the Senate. Not more than three members of the commission shall be from the same political party. In making such appointments, the governor shall give due recognition to the varying geographical sections of the State. The commission shall select its own chairman. The director (of the Department of Water Resources) shall be an ex officio member of the commission without vote.

"The initial members of the commission shall be appointed within thirty days after the effective date of this act. Of the initial membership one member shall be appointed for a term of six years, two members shall be appointed for a term of four years and two members shall be appointed for a term of two years."

Purpose and General Responsibility As enacted by the legislature of the State of Washington, the Washington State Canal Commission is to aid commerce and navigation, including the development of recreational facilities related thereto, and to otherwise promote the general welfare by the development of navigation canals within the boundaries of the State of Washington.

The commission shall make such investigations, surveys, and studies it deems necessary to determine the feasibility of the development of a navigation canal, or systems of navigation canals within the State of Washington.

The commission is authorized as a local sponsor to cooperate, contract, and otherwise fully participate on behalf of the State of Washington with the United States of America, in any study relating to the determination of feasibility of the navigation canal or navigation canal systems, and in any project relating to the construction, operation, or maintenance of the navigation canal, or navigation canal systems to be undertaken by the United States of America.

Policy The Washington State Canal Commission, as a policy matter, believes there is a demand to be met by the commission for water resource development and management as related to commerce, navigation, and recreational facilities. The importance of

commerce and navigation as well as recreational facilities to the State of Washington is the preservation and utilization of a priceless heritage for the future generations. The essential planning for achievement of the economic potential of water-borne commerce and the full use of the pleasure boating opportunities throughout the state relate to the conservation and the utilization of all regional water and related land resources.

Organization and Programs The commission is cooperating in the evolution of a logical and orderly development of our navigation resources. These programs include coordination and compilation of pertinent planning information on water-borne commerce and traffic.

(For basic reference, see RCW 91.12.)

Washington State Oceanographic Commission

Origin and Background An Oceanographic Commission was established by Chapter 243, Laws of 1967, as a permanent organization consisting of 12 members, five of whom are to be appointed by the Governor from the public at large including one representative of higher education, one representative of private industry, and one representative of labor as well as three members from the State Senate and three members from the House of Representatives. The chairman of the State Marine Resources and Development Committee shall be an ex officio member without vote.

Purpose and Policy The Commission was given the following powers, duties, and functions:

1. Encourage, assist, develop, and maintain a coordinated program in oceanography for the benefit of the citizens of the State and the Nation.
2. Encourage private industrial enterprise to utilize the Puget Sound area as a base for oceanographic work.
3. Promote national interest in Puget Sound as a base for national oceanographic programs.
4. Assist in developing educational programs to provide the professional and technical graduates required by oceanographic expansion in the area.
5. Undertake projects designed to inform the citizenry of the importance of oceanography to the development of the area.

6. Assist in the study of problems of waterfront development, pollution, and parks and recreation areas for public use.
7. Accept funds, gifts, bequests, and devises from any lawful source given or made available for the purposes of this act, including but not limited to grants of funds made with or without a matching requirement by the Federal Government.
8. Encourage, supplement, and assist the development of programs under the National Sea Grant College and Program Act of 1966 by the University of Washington and other participating educational institutions of the State and region. The programs and mission of the Commission and its institute are not to be in duplication of the existing program of the State in oceanographic research, training or public service, or of the program developed under the National Sea Grant College and Program Act of 1966.
9. Make annual reports to the Washington State Legislature, or to the appropriate interim committee thereof, all activities undertaken in connection with the power, duties, and functions assigned ... together with any recommendations for new legislation designed to accomplish the purposes of this act.
10. Delegate in its discretion and to the extent permitted by the State constitution, any of the powers and duties set forth in subsections (1) through (8) to the Oceanographic Institute of Washington formed pursuant to section 5 of this act.

Origin and Programs Section 5 of the act provides that to facilitate the exercise of its powers, duties, and functions, the members of the Commission are empowered to form a nonprofit corporation of which the members of the Commission shall be members and trustees as long as they are members of the Commission. Any nonprofit corporation so formed should be known and designated as the Oceanographic Institute of Washington. The Institute shall, subject to the advice and consent of the Commission, coordinate, promote, and carry out such policies for oceanographic programs and development as may be formulated by the Commission.

Parks and Recreation Commission

Origin and Background The first park and recreation activities began in 1912 with the appointment of a "Park Board," establishment of the first parks at Larrabee, near Bellingham, and John R. Jackson House, near Chehalis. The State now administers 73 State Parks, 32 Heritage Sites, 72 Marine Parks, the State tide and shoreland areas and islands, located throughout the state.

Today the system is governed by the Washington State Parks and Recreation Commission which was formed in 1947 by the Washington State Legislature. The seven members are appointed by the Governor, confirmed by the Senate and serve 6-year terms of office. Subsequent legislatures have added to the duties and responsibilities of the Commission from time to time.

Purpose and General Responsibility The basic purposes and responsibilities of the Commission include "the care, charge, control, and supervision of all parks and parkways acquired or set aside by the State for park or parkway purposes," as well as "Select and purchase or obtain options upon, lease, or otherwise acquire for and in the name of the State such tracts of land, including shore and tidelands, for park and parkway purposes as it deems proper."

Further responsibilities include the authority to accept funds and donations, make rules and regulations, hire necessary assistance, develop and maintain the park and parkways system, grant concessions, and operate a youth development and conservation corps.

The Commission also has the responsibility to "study and appraise park and recreation needs of the State and assemble and disseminate information relative to parks and recreation" and "coordinate the parks and recreation functions of the various State departments, and cooperate with the State and Federal agencies in the promotion of parks and recreational opportunities."

The purposes of the programs of the Parks and Recreation Commission are designed to interpret nature, history, geology, archeology, botany; and the out-of-doors in general shall be promoted where the opportunity presents itself.

Policy Departmental policies under the laws and intent governing the State Parks and Recreation Commission are to provide the citizens of Washington and guests of the State with sufficient areas of statewide significance to be acquired, developed, and

maintained for use by the public in providing wholesome outdoor recreation that contributes to the refreshment of body, mind, and spirit. In this the Commission is concerned with acquiring areas that have special scenic, wilderness, recreational, historical, archeological, and geological value. The significance of an area is to be clearly stated and developed in such a manner as not to dilute this significance.

Park areas will be retained in their natural state and the native flora and fauna preserved as far as possible, being relatively spacious and nonurban in nature.

Structures or improvements to be placed within these areas are being designed so as not to destroy or impair the value of the natural features. The improvements provided are usually limited to the safety, information, or comfort of the park visitor.

Water frontage, water areas, and access to water areas are given high priority in the acquisition and development of parks.

Organization and Programs The programs of the Commission are as follows:

General Administration This program consists of general executive formulation, direction, and control of all programs and activities and the execution of administrative assignments not specifically allocated to other division programs.

Administrative services section maintains: agency management, personnel, fiscal reporting, and biennial budget preparation, supply, central files, and custodial and legal functions.

Park Operations Division This program consists of the operation and maintenance of the entire parks system. Facilities provided at individual park areas vary, but include overnight camping, picnicking, swimming, boat launching, and group camp facilities. Other services provided are the operation of the shop areas located at Lake Sammamish State Park involving the construction of picnic tables, guard blocks, stoves, maintenance and repair of park vehicles and utility equipment.

The Youth Development and Conservation Corps is a part of the operating program and provides the opportunity for employment of young men in programs of conservation, development, improving and maintaining natural areas for the welfare of the general public. This program offers young men the opportunity to learn vocational and work skills, develop good work habits and sense of responsibility and contribution to society. Improvement in personal, physical, and moral well-being and the opportunity to develop an understanding and appreciation of nature are additional benefits to the participant.

Planning and Development Division This division is responsible for the planning and development of all major planning, construction, and repair in the State parks system. This involves the development of master and site plans; preparation of plans and specifications and the letting of contracts for construction work; inspection and supervision of all construction within the system; and preparation for the acquisition of new areas.

Consultation & Education Division This division provides comprehensive consulting, coordinating, interpretation, education, and implemental services to the Commission and to various State agencies, and to political subdivisions, their agencies and officers, on matters pertaining to the planning, acquisition, legal requirements, financing, developing, interpretation, and administration in park and recreation areas, facilities, and programs.

Land Acquisition Division This division is responsible for the acquisition, sale, lease, rental, and management of all department properties for parks and recreational purposes. Records including titles, deeds, withdrawals and easements, leases and agreements, are processed and maintained within the files of this program. This program is further charged with the forestry and the boundary survey program of the Commission.

(For basic references, see RCW Chapters 43.51 and 70.88.)

Interagency Committee for Outdoor Recreation

Origin and Background The Interagency Committee for Outdoor Recreation was created by passage of Initiative 215, "The Recreation Marine Act of 1964." This Committee is composed of the Commissioner of Public Lands, Directors of the Departments of Parks and Recreation, Game, Fisheries, Highways, and Commerce and Economic Development; and five members from the public appointed by the Governor. The Committee, subject to the authority and responsibility of the State Planning Agency, is authorized to prepare, maintain, and keep up to date a comprehensive plan for the development of the outdoor recreation resources of the state.

In 1967, Governor Evans requested a \$40 million bond issue for outdoor recreation purposes. The resulting legislative measure, Referendum 18, was approved at the November 1968 election by a heavy majority of the electorate.

Purpose and General Responsibility The primary purpose of the Committee is to administer funds from the Outdoor Recreation Account which includes monies from unreclaimed marine fuel tax

receipts and the sale of the bond authorized by Referendum 11 at the November 1964, State General Election in the amount of \$10 million. In addition, the Chairman has been designated the State liaison officer for the Land and Water Conservation Fund program and, in this role, is responsible for administration of funds from this source allocated to the State of Washington. Governor Evans requested a \$40 million state bond issue to expand the program of the IAC, which was approved at the November 1968 election by a heavy majority of State voters.

Policy Referendum 11 provided \$10 million for acquisition of outdoor recreation areas. None of this could be used for development. Initiative 215 provided revenue from the unexpended portion of the marine fuel tax, of which 20 percent would be used for development, the remainder for acquisition. Referendum 18, the \$40 million bond issue passed in 1968, did not specify how much could be spent for acquisition; how much for development. Money from the Land and Water Conservation Fund can be used for planning, acquisition, and development.

Organization and Programs The program of the IAC is oriented toward expansion of the outdoor recreational facilities available to the citizens of the State by administration and distribution of allocated funds and is not, therefore, directed toward achieving preservation or purity of water resources in the state, except for recreational purposes. The preservation of these resources is, however, a by-product of this program to retain suitable lands and adjacent waters for recreational activities.

(For basic references, see RCW Chapter 43.98 and 43.99.)

Water Pollution Control Commission

Origin and Background The abundant water resources of the State were initially used for transportation, for municipal, industrial, and irrigation supplies, and for fishery and recreational purposes. During this early period, there was little influence on natural flows or quality, and little apparent need for water resource regulation or planning.

The second phase of development included continuing water use for transportation, fishery and recreation, accompanied by expanding single-purpose usage for irrigation, municipal and industrial water supply and hydropower development. Initial flood control, drainage and channel maintenance projects were begun, often resulting in significant changes in natural flows and water

quality. The early single-purpose agency programs of water quality management were combined in an interagency water pollution commission during the period 1937 to 1944. This significant action initiated the new concept of multipurpose use and interagency coordination for water related resource use and development.

The third phase of water resource development emphasized the concept of multipurpose water resource use and management for purposes of irrigation, municipal and industrial water supply, fish and wildlife, recreation, water quality control, power, and flood control. This phase has been accompanied by increasing emphasis on water quality control as evidenced by the passage of Water Pollution Control Act of 1945, RCW 90.48, establishing the Pollution Control Commission; the Federal Water Pollution Control Act of 1956, and subsequent amendments affecting State programs, and the 1967 Revision of the State Water Pollution Control Law.

During this time, the philosophy of water resource management has been significantly expanded to include the concepts of coordinated long-range planning and development by major river basin and drainage areas to attain optimum, sustained, multipurpose water resource benefits. These concepts also embody an awareness of the need for the management of flow and quality and the use of sound land management techniques as basic elements in water resource planning, development, and administration.

Members of the Water Pollution Control Commission are the Directors of the State Departments of Water Resources, Agriculture, Health, Fisheries, and Game, with the Director of Water Resources usually selected to serve as chairman. Regular meetings of the Commission are held bimonthly. The Commission members may recommend a staff director to be appointed by the Governor, who will in turn have charge of operating, staffing, coordinating, and supervising the activities of the Commission employees.

Purpose and General Responsibility The Water Pollution Control Commission has jurisdiction and enforcement authority to prevent and control the pollution of streams, lakes, rivers, ponds, inland waters, salt water, water courses, and other surface and ground water resources of the State of Washington.

The Commission has the power to adopt, prescribe, and promulgate rules, regulations, and standards consistent with the public welfare and with known, available, and reasonable methods of preventing pollution.

The following responsibilities are also charged to the Commission:

1. To determine the qualities and properties of water which indicate a polluted condition of waters of the State.
2. To review and approve plans and specifications for the construction of new sewage systems and treatment plants or for improvements and extensions thereto.
3. To issue waste discharge permits which specify conditions necessary to avoid pollution resulting from the discharge of wastes from commercial and industrial operations.

The Commission has the authority to delineate and establish sewerage drainage basins in the State for the purpose of developing and/or adopting comprehensive plans for the control and abatement of water pollution within such basins. Plans may be prepared by any municipality for Commission approval.

In 1967, the State Legislature, by authority of Chapter 13, Laws of 1967, provided for substantial revision of the basic water pollution control laws of the State. Significant features of this act concern the development of a more effective enforcement procedure and the establishment and enforcement of water quality standards; the granting of a broadly based agency subpoena power; the granting to the control agency of a so-called "summary abatement" procedure; and the establishment of a State matching fund program to provide funds to assist local government units in the construction of sewerage facilities.

In Chapter 106, Laws of 1967, the legislature passed a bill authorizing the people to vote upon a \$25 million bond issue to provide funds to implement the aforementioned matching fund program, which was approved at the November 1968 general election.

Chapter 139, Laws of 1967, Extraordinary Session, authorizes the Attorney General to recover monies for damages to State resources caused by polluters of State waters, and empowers the Water Pollution Control Commission to levy fines for violations of the State's water pollution laws.

The same legislative act, Chapter 139, also provides for certain exemptions from sales and use taxes relating to construction of water pollution control facilities.

The Commission has the responsibility to make and administer construction grants within authorized State appropriations for municipal waste collection, treatment and disposal, and establish priorities and allocations for Federal construction grant programs for qualified waste collection, treatment and disposal facilities. Chapter 133, Laws of 1969, authorizes the Commission to enforce

the law relating to accidental discharges of oil to waters of the State. The Commission has the authority to carry out oil removal projects and recover expenses when violators fail to immediately collect, remove, treat or disperse oil. Provisions are made for the assessment of penalties if found to be warranted.

Policy The Commission is guided by Section I of the enabling legislation which states: "It is declared to be the public policy of the State of Washington to maintain the highest possible standards to insure the purity of all waters of the State ... and to that end require the use of all known, available and reasonable methods by industries and others to prevent and control the pollution of the waters of the State of Washington."

Supporting water quality policies adopted by the Water Pollution Control Commission provide for program development by river basins and other drainage areas with emphasis on prevention programs as well as correction of existing problems.

Commission policies for the waters of the Lake Washington drainage call for the ultimate elimination of waste discharges from this area.

Commission policy also requires that all waste discharges comply with standard provisions to prevent pollution with specific treatment and control techniques being required as necessary or desirable.

The Commission adheres to the policy that existing and new domestic waste dischargers shall provide adequate secondary sewage treatment, disinfection, and outfall facilities.

Existing and new commercial and industrial operations discharging an organic waste shall connect to a municipal system where possible or provide adequate secondary treatment and outfall location.

Existing and new commercial and industrial operations discharging an inorganic waste shall connect to a municipal system where possible or provide coagulation, sedimentation, chemical treatment, or other necessary treatment and adequate outfall.

Where existing and new commercial industrial or domestic waste discharge to salt water, consideration will be given to permitting a lesser degree of treatment if it can be demonstrated or shown by study that, through effective controls, proper operation and adequate outfalls, the quality of receiving water will not be adversely affected.

Organization and Programs

Technical Services Division Basic Data Program:

In conjunction with the U.S.D.I. Geological Survey, the Commission has operated a systematic basic data collection program since 1958 on all of the major river basins on a statewide basis area, for which report has been published covering the period 1958-1961. Data subsequently collected are recorded on punch cards and are available for reference.

Periodic Surveys and Monitoring: These programs include the collection of water quality data in North and South Puget Sound; major harbor and estuarial areas at Puget Sound, Grays Harbor, and Willapa Bay, as well as on major tributary rivers and streams to Puget Sound and the Columbia River. The purpose of these surveys is to detect and analyze water quality conditions and characteristics with reference to known sources and factors which alter and depreciate water quality.

Research: These programs involve development of analytical techniques for measuring trace amounts of toxic materials and the use of bio-assays to determine toxicological influences of extraneous substances in waters of the State.

Engineering Division The Engineering Division

programs generally involve the following three phases of activity: control of wastes from municipal, industrial, and the pulp and paper industry sources. Division efforts are directed toward pollution prevention from new sources and the correction of pollution problems resulting from existing waste discharges.

Municipal Waste: Municipal waste programs include liaison in community planning, review and approval of plans, allocation of appropriated State and PL 84-660 funds for treatment plant construction, and the supervision and inspection of plant operation.

Industrial Waste: Program implementation involves determinations of pollution potential, water quality needs, and development of waste discharge permit specifications, plan review and continuing liaison with periodic inspections and monitoring as necessary.

Pulp and Paper Industry: Programs involve intensive water quality studies in water areas affected by mill wastes, development and implementation of waste discharge permit specifications, development of effluent and water resource monitoring programs, liaison for research, and development involving both by-product recoveries and waste treatment.

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Water Quality Planning Division The activities of this division include the collection, summation, and analysis of pertinent data by major drainage areas so as to provide a basis for long-term water quality management programs referenced to both present and future sources and factors of water pollution in accordance with declared policies and pertinent State and Federal legislation.

Establishment of Water Quality Standards The Commission engaged in a program to establish and enforce water quality standards as provided in RCW 90.48.130 and PL 89-234. This program includes provisions for water quality monitoring and enforcement. After public hearings, these standards were adopted as a regulation on June 29, 1967.

Presently the Commission is preparing suggested water quality standards for intrastate streams and will hold a series of public hearings during 1969 relative to the adoption thereof.

(For basic references, see RCW Chapter 90.48.)

Soil and Water Conservation Committee

Origin and Background The State Soil and Water Conservation Committee was established in 1939 in recognition of the need for State coordination and liaison in matters of soil and water conservation. The Soil and Water Conservation Committee consists of five nonsalaried farmer members. Two are appointed by the Governor and three are elected for 3-year, staggered terms by the Washington Association of Soil and Water Conservation District. Ex officio members are the director of the Department of Water Resources and the director of the Institute of Agricultural Sciences at Washington State University.

Purpose and General Responsibility The function of the Committee is to administer the soil and water conservation district law and to facilitate the formation and effective operation of locally governed soil and water conservation districts.

Policy The policy of the Committee is to encourage the development of sound water and land management practices for application at the local district level of government.

Organization and Programs Under the guidance of the Committee, the State soil and water conservation districts are

charged with the conservation of soil and water resources, and for the control and prevention of soil erosion in order to preserve natural resources; control floods; prevent impairment of dams and reservoirs; assist in maintaining navigability in rivers and harbors; preserve wildlife; protect the tax base public lands; and promote the health, safety, and general welfare of the public. The Committee also schedules and supervises annual elections and meetings of supervisors in each district, fills appointed positions with qualified farmer members, and acts as a coordinating and advisory agency for 68 existing districts functioning within the state.

(For basic reference, see RCW Chapter 89.08.030).

WYOMING LAW OF WATER RIGHTS



PREPARED BY

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Cheyenne, Wyoming

WYOMING

Administration of Water Rights

State Engineer and Board of Control

In 1885, the Legislative Assembly of the Territory of Wyoming created the office of Territorial Engineer. It gave him general supervision of the diversion and division of the water of the natural streams, and supervision of the Water Commissioners of the territory.^{1/} In 1886, Elwood Mead was appointed to be the first Territorial Engineer. When Wyoming became a state, Mr. Mead became the first State Engineer. He was largely responsible for the constitutional provisions and the first water laws.

The constitution created the office of the State Engineer and gave him general supervision of the waters of the State and of the officers connected with its distribution.^{2/} Upon proper application, he issues permits for the use of water, and through the Division Superintendents, supervises the water of the State.^{3/} He is now also responsible for coordinating a State water and related land resource plan.^{4/}

The State Board of Control was also constitutionally created. Its duty is to supervise appropriation, distribution, and diversion of water throughout the State. The Board consists of five members--the four Water Division Superintendents and the State Engineer.^{5/} The Board has power, after proper notice and hearing, to accept or reject proofs of appropriation^{6/} and various types of amendments to existing water rights.^{7/} The Board also hears and decides the questions of abandonment and other water problems.^{8/} Its decisions are subject to review by the courts.^{9/}

Each of the four Water Division Superintendents is in charge of a Water Division. They supervise the Water Commissioners in their respective Division. They also control the storage and use of water, accept proofs of appropriation, and hold hearings on various matters. They are supervised by the State Engineer.^{10/}

Each of the four Water Divisions is divided into Water Districts.^{11/} Commissioners are appointed by the Governor with the recommendation of the Division Superintendent and advice of the proper County Commissioners.^{12/} The Water Commissioner is the chief administrator of water in his District.^{13/} His decisions are subject to appeal to the Division Superintendent, then to the State Engineer, and finally to the courts.^{14/}

Other State Agencies

Seven other State agencies have an interest in water matters. They are the Board of Land Commissioners, the Department of Public Health, the Game and Fish Commission, the Highway Department, the Department of Economic Planning and Development, the Recreation Commission, and the State Soil and Water Conservation Committee. Their interests are:

1. The Board of Land Commissioners oversees the management, leasing and sale of State lands. This includes watershed protection through erosion control and water conservation practices.^{15/}

2. The Department of Public Health oversees control of water quality and has promulgated Water Quality Standards under the Federal Water Pollution Control Act of 1965.^{16/}

3. The Game and Fish Commission has the duty to develop and manage water based recreation. The Commission may acquire water rights for recreational purposes by making proper application to the State Engineer.^{17/}

4. The Highway Department, in cooperation with the U.S.D.I. Geological Survey, conducts flood water studies for highway planning purposes.^{18/}

5. The State Department of Economic Planning and Development promotes development of Wyoming resources, including water. To accomplish its goals, it has a revolving fund for small water development projects and also acts as an advisor to the Farm Loan Board which makes loans for water projects. The Department holds, for resale, storage space in Fontenelle Reservoir.^{19/} It is authorized to perfect water rights under and in compliance with Wyoming law and may sell water developed pursuant to rights so developed.

6. The Recreation Commission may acquire water to serve State parks, public recreation grounds, historical landmarks, and historical archaeological, geological, and ecological sites now existing or created later. The Recreation Commission must make application to the State Engineer for any uses of water.^{20/}

7. The State Soil and Water Conservation Committee organizes and coordinates Soil and Water Conservation Districts for the better use of Wyoming water.^{21/}

Districts

There are nine different types of local water districts

that are presently operating in Wyoming. All of these districts are formed by order of the district court after petition by a required number of landowners. The districts include:

1. Irrigation Districts. Irrigation Districts may be formed to (a) reclaim and irrigate lands, (b) construct and operate water storage and distribution facilities and electric power plants, and (c) make and sell electric power incident to the other functions. District lands need not be connected, but each tract within the district must have benefits exceeding costs. There are presently 34 Irrigation Districts in Wyoming.^{22/}

2. Drainage Districts. Drainage Districts may be formed to construct and maintain drains, levees, and drainage ditches. The district may include several noncontiguous or disconnected tracts of land. But, as is the case in many of the older water district laws, benefits are to exceed costs on each tract. There are presently 20 Drainage Districts in Wyoming.^{23/}

3. Jointly operated Irrigation and Drainage Districts. Irrigation Districts and Drainage Districts can cooperate in the operation and maintenance of their respective systems. A governing body, called the Board of District Managers, is composed of either one or two commissioners from each district cooperating. There is one jointly operated Irrigation and Drainage District in Wyoming at present.^{24/}

4. Water Conservancy Districts. Water Conservancy Districts may be organized for conserving, developing, and stabilizing supplies of water for domestic, transportation, industrial, manufacturing, irrigation, power, recreation, and other beneficial uses. They may exist within or across boundaries of other governmental units. However, first class cities must give their consent before they may be included in the district. There are three Water Conservancy Districts in Wyoming at the present time.^{25/}

5. Soil and Water Conservation Districts. Soil and Water Conservation Districts bring landholders together into effective work groups to examine soil and water conservation needs. Their principal interests are to prevent erosion, control runoff, and, in general, to promote better use of soil and water. These problems are generally larger than the area contained in just one farm. Therefore, several landowners working with each other and the Soil Conservation Service attack these problems under Federal laws, such as P.L. 566, the Small Watersheds Project Act. Soil and Water Conservation Districts may organize across the lines of other governmental and district boundaries. Wyoming presently has 45 Soil and Water Conservation Districts which include approximately 90 percent of the area of the State.^{26/}

6. Watershed Improvement Districts. The most recent Water District Act was passed in 1961. It permits forming of Watershed Improvement Districts. These districts may be formed as subdistricts of Soil and Water Conservation Districts. The purpose of the Watershed Improvement District may be to control erosion, flood water, and silt. The district may store, develop, use, and dispose of water. The area included may be within a single watershed or adjoining watersheds. The area may include a part of one or more Soil and Water Conservation Districts.^{27/}

Advantages of Watershed Improvement Districts over Soil and Water Conservation Districts are the Watershed Improvement Districts' financial powers. The Soil and Water Conservation Districts cannot incur debt, build and run facilities, or levy charges or taxes. Watershed Improvement Districts have all these powers. They can charge for special benefits to land. They may acquire property. They have the power of eminent domain. They may incur debt. They may contract other governmental units at any level. At present there is one Watershed Improvement District in Wyoming.^{28/}

7. Water and Sewer Districts. The purposes of Water and Sewer Districts are to supply domestic water, sewage systems, and/or storm drain systems outside cities and towns. Local Improvement Districts can also be formed under this law. There are two Water and Sewer Districts and two Sewer Districts presently in Wyoming. Others are in various stages of formation.^{29/}

8. Sanitary and Improvement Districts. Sanitary and Improvement Districts may be organized in unincorporated areas to facilitate the establishment and maintenance of satisfactory water works and sewage disposal. There are five Sanitary and Improvement Districts in Wyoming at the present time.^{30/}

9. Health Districts. Cities, towns, counties, and unincorporated areas, either in combination or separately, can organize into Health Districts. The District Board of Health submits its budget to the County Commissioners who may levy up to 1-mill of property tax for health purposes. Health Departments may make rules to prevent disease and promote public health by controlling of water quality. There are presently two Health Districts in the State of Wyoming.^{31/}

Obtaining a Water Right

The present method of obtaining a right to use water in Wyoming is under the supervision of the State Engineer and the Board of Control. This system, which was first established in 1890,^{32/} became the prototype for other Western States. The

method outlined is exclusive^{33/} and those who divert water without first obtaining a permit from the State Engineer are guilty of a misdemeanor.^{34/} The same basic procedure is used for surface water and underground water.^{35/}

"Any person, association or corporation" may acquire the right to use water.^{36/} This includes:

"municipal corporations (which) shall have the same right as individuals to acquire rights by prior appropriation...to the use of water for domestic and municipal purposes,...."^{37/}

If an application anticipates a diversion in excess of 25 cfs or reclamation of over 1,000 acres, the State Engineer may request more detailed information to satisfy himself of the good faith of the applicant.^{38/} A common carrier, or a public utility, may initiate appropriative rights for water to be used by its consumers.^{39/} There is no good reason, according to the Wyoming Supreme Court,^{40/} if the law is complied with in other respects, why a person should be forbidden to act as a volunteer for another in obtaining a right to use water.

The procedural steps for acquiring a right to use water include:

"an appropriation of water in good faith, initiated by the appropriator or his agent in the manner prescribed by law, pursuing the construction of works in connection with it, if necessary, with reasonable diligence, and applying the water to beneficial use within a reasonable time."^{41/}

The following procedure provides the statutory means for implementing these principles under the supervision of the State Engineer and Board of Control:

1. A registered professional engineer or land surveyor, licensed to practice in Wyoming, must conduct a survey and prepare maps and plans.^{42/}

2. A prospective user files his application, maps and plans, accompanied with the proper fee to the State Engineer.^{43/} This must be done prior to the initiation of any construction.^{44/} The date of priority is established as that date when the application is accepted by the State Engineer.

"Under our present statutory system, the inception point or date of a water right is not the commencement of construction, or even the commencement of survey. It is the filing of an application for a permit."^{45/}

As an early Wyoming court stated:

"To constitute an appropriation there must exist not only an intent to take the water, but that intent must be accompanied or followed by some open physical demonstration, and there must ultimately be an application to some beneficial use, the initial act must also be followed up with reasonable diligence, and the purpose consummated without unnecessary delay in order that, by the doctrine of relation, the time of appropriation may relate back to such initial proceeding."^{46/}

3. After acceptance of the application and accompanying materials, it is the duty of the State Engineer to examine everything submitted to ascertain if the descriptions in the accompanying materials agree with the descriptions in the application.^{47/} He also must be certain that the maps, plans, and application fulfill the statutory requirements,^{48/} and comply with the Rules and Regulations of the State Engineer.

If the materials submitted do not meet the necessary standards, the State Engineer may return them to the applicant or his agent for necessary corrections.^{49/} When the application, maps, and plans meet the State Engineer's requirements, and if the proposed use is not against the public interest^{50/} and does not impair existing rights, the State Engineer must approve the permit.^{51/} If, in the State Engineer's opinion, there is no available unappropriated water, or if the use conflicts with existing rights or is detrimental to the public interest, he shall reject the application.^{52/}

4. When the State Engineer approves a permit, he shall require that construction begin within one year of the date of approval.^{53/} If the permit contemplates a ditch, the State Engineer shall also require that the application of water to a beneficial use be completed within a specified time after commencement of construction.^{54/} All construction work must be completed within 5 years after the date of approval. The State Engineer may require it to be completed sooner.^{55/} Within 5 years of the date of completion, the applicant must submit proof of appropriation.^{56/} The State Engineer may, for good reason, extend these times.^{57/} However, the request for extension must be received prior to the expiration date.^{58/}

5. The user must then comply with the conditions of the permit. He must inform the State Engineer of his progress from time to time. He is required to notify the State Engineer when he commences construction, when he completes construction, when he puts the water to beneficial use. These notices must be received by the State Engineer prior to the dates specified in the permits.^{59/}

6. After the applicant has used the water as specified in the permit, and filed the proper notices with the State Engineer, he may then submit proof of appropriation to the Division Superintendent of the Water Division in which the right is situated.^{60/} The superintendent will then advertise in a local newspaper that such proofs have been taken.^{61/} The proofs will then be held open for public inspection. Any affected water user may then object to the allowance of the proof.^{62/} Upon objection, the Division Superintendent shall hold a hearing concerning the validity of the objections. He shall take testimony and receive evidence from all concerned parties.^{63/} The Division Superintendent shall then submit the transcript and the evidence to the Board of Control.^{64/} At its next meeting, the Board shall consider all proofs taken by the Division Superintendents (including those that have been contested) and if they are satisfied that there are no conflicts and that the appropriations have been perfected in accordance with the terms of the permit, the Board shall issue a certificate of appropriation.^{65/} A copy of this certificate is filed with the County Clerk of the county in which the land is situated.^{66/} That certificate is evidence of an adjudicated right to the use of the water.

Extent of a Water Right

The Wyoming Constitution provides that the ownership and control^{68/} of the State's water resides in the State. This has been interpreted to mean that the State holds the water as trustee for use of the public.^{69/} Although a user may obtain a water right by following the proper statutory procedures,^{70/}

"The water belongs to the State and only the use of it is granted to an appropriator in the manner and method specifically permitted."^{71/}

The Wyoming Legislature has provided for three different types of appropriations: direct use of the unstored natural flow, stored water, and underground water. Although the methods of acquisition of each of these appropriations are basically the same, each type of appropriation has limitations peculiar to that particular appropriation. All of the rights are limited to that amount that can be beneficially used within the terms of the permit.^{72/} In addition, permits for the direct use of unstored surface water are limited to one cubic foot per second for each 70 acres. If a direct flow right was established prior to 1945, and all other pre-1945 rights from the same source have been satisfied, a prorated share of the surplus, up to an additional cubic foot per second for each 70 acres, may be diverted. Beneficial use under the terms of the permit is the only limitation placed on stored water or underground water.

Once having been acquired, the place, purpose, and method of use, under certain conditions, may be changed without loss of priority. However, any such changes are strictly limited to those situations wherein no other user from the same source of supply will be injured. Also, a right for the direct flow of unstored surface water for agricultural purposes acquired after 1909 cannot usually transfer that right to lands not described in the permit.^{73/}

Wyoming statutes establish preferences for different types of uses and methods for changing nonpreferred uses to a preferred use.^{74/}

The order of those preferences are:

1. Water for drinking purposes for both man and beast.
2. Water for municipal purposes.
3. Water for the use of steam engines and for general railway use, water for culinary, laundry, bathing, refrigerating, and the manufacture of ice, steam and hot water heating plants and steam power plants and industrial purposes.^{75/}

Although the statute refers to these uses as "preferred uses," the term must be defined to be understood. A nonpreferred senior right will not be shut down to furnish water to a preferred junior right. The preferred user has only the right to obtain an earlier nonpreferred right and change it to a preferred use. With the exception of use for steam power plants and industrial purposes,^{76/} preferred uses carry with them the power of condemning earlier, nonpreferred rights.

The statute makes one express exception to this general policy statement:

"The use of water for irrigation shall be superior and preferred to any use where water turbines or impulse water wheels are installed for power purposes."^{77/}

This language gives irrigation and all other enumerated preferred uses a true preference over water uses "where water turbines or impulse water wheels are installed for power purposes."^{78/} This "true preference" gives any enumerated preferred use the right to call for water even though that use has a priority date junior to a right "where water turbines or impulse water wheels are installed for power purposes,"^{79/} without condemnation of the senior use.

Changing a right to preferred use necessitates a public notice, an inspection and hearing if necessary by the proper Division Superintendent, report of the superintendents to the Board

of Control, and an Order by the Board of Control. In determining whether or not a change of use should be allowed, the Board of Control must equally guard all the various interests involved.^{80/}

There are two types of interests to be guarded: (1) the interests of other users, and (2) the interests of the transferring party. These are adverse interests. It is the duty of the Board of Control to protect them both. To protect these interests, it is, of course, necessary to first determine their extent.

The other users most likely to be affected by a change are the junior appropriators from the same source. It must be remembered that:

"An appropriator of water obtains by his appropriation that only of which he makes a beneficial use, ... and ... as against a subsequent appropriator, a senior appropriator cannot give the water he does not use to another for a certain period who otherwise would have no right to use it...."

* * *

"His appropriation, and therefore his water right dependent thereon, is at all times limited, within the maximum of his appropriation, to the quantity capable of beneficial use and actually so used. If during any period he does not require the use of the water it falls during that period to the subsequent appropriator who does need the same and can beneficially use it.... In other words, the burden upon the use must not be enlarged beyond that which rested upon it under the original appropriation and while in the hands of the original appropriator as he was entitled to and did use it."^{81/}

In making a change of a direct flow irrigation right to industrial use or to other use, the return flow must be considered. The industrial user is only entitled to the same consumptive use that was made under the old right. He is not necessarily entitled to divert the same amount as the irrigator. The same amount of water, both in quantity and quality, must be available to other users as was under the previous use. Thus the return flow from both uses must be determined and the industrial right must be adjusted accordingly. This, of course, varies from case to case, and the burden is upon the transferor to show to the satisfaction of the Board of Control that no other users will be injured. In one instance, when the city of Laramie obtained a direct flow irrigation right and changed its use and its point of diversion, the city was allowed to continue diverting the same amount because

reputable engineering reports showed that, under the original use, return flows averaged only 19 percent, and the average return flow from the city's use would be approximately 60 percent.^{82/} Each transfer must stand upon its own merits.

Storage rights and underground water rights are more flexible than surface water rights. Owners of storage rights are not limited in time of use and need not account for return flow. If the reservoir has a secondary permit, a proportionate share of the storage capacity attaches to those lands, and the transferor of the water right must have the consent of the landholders. However, once such a consent is obtained, it is a simple matter to petition the State Board of Control to detach the secondary permits from those lands and change it to another use. Even though other users may have been taking advantage of the return flow from application of stored water, they have no right to its continuance. The owner of the stored water need not irrigate. If he does not irrigate, the water remains in the reservoir, not in the stream, and other users cannot force its gratuitous release.^{83/}

Ground-water resources in Wyoming are largely undeveloped. However, if a preferred user desired to obtain an existing well for another use and convert it to the preferred use, the industry would be subject to the same limitation as upon an appropriation which diverts water from outside the basin of use. Therefore, while the transferor would not have to account for the return flow (unless it could be shown that some of the water returned to the original aquifer), he would be limited as to the historical time of use.

In attempting to state a single overriding principle common to all changes of use, it is necessary to return to the river and examine the various types of uses and the effects of each use upon the river. A direct flow appropriator diverts from the river when he needs water and when it is available to him in priority. His right is limited to beneficial use. So long as he can beneficially use that amount upon lands described in his permit, he can continue his diversion until the supply in the river is inadequate to furnish all earlier appropriations. Irrigation efficiency being what it is, there will probably be return flow. If the efficiency is increased, since no more land can be added to the permit, less water will be diverted, and more will remain in the stream, available to junior appropriators.

The same is not true of the other types of appropriations. The trans-basin diverter brings a new source of water into the river. Any addition to the basin of use is an addition to the natural supply, and beyond the entitlement of other users in the basin. The storage of water affects the natural river at the time

of storage. Senior appropriators are not affected because storage in the junior reservoir can only be made after the senior's rights are filled. Junior appropriators are only entitled to the natural supply available after the senior reservoirs are filled. The owner of the storage water right, within the terms of the permit, has the right to use the stored water at the time and place of his choosing. Even though a part of the stored water may become available to other users through return flow, such availability is a gratuity to them, and does not create an enforceable right in its continued availability.

Abandonment of a Water Right

In 1888, the Territorial Legislature passed an irrigation-appropriation statute that included a provision that any water user who failed to use water under an appropriation for two successive years would be considered as having abandoned that appropriation.^{84/} In 1905, the nonuse period was extended to 5 years.^{85/} Much of the 1905 language has been retained in the present abandonment statute.

That statute provides that if any water user:

"shall fail to use the water therefrom for irrigation or other beneficial purposes during any five successive years, they shall be considered as having abandoned the same, and shall forfeit all water rights, ... and the water formerly appropriated by them may be again appropriated for irrigation and other beneficial purposes, the same as if such ditch, canal or reservoir had never been constructed...."^{86/}

The statute is not self-executing, and a water right is not considered abandoned until the proper authority, either the Board of Control or the District Court, issues an order of abandonment.

The statutes provide that any water user who might be affected by the abandonment may petition the State Board of Control to abandon another user's water rights.^{87/} If the Board feels a prima facie case is present, a hearing is held before a Division Superintendent^{88/} who then reports to the Board. If the Board feels that rights have been abandoned, an order is issued.^{89/} This order is appealable to the District Court and the Wyoming Supreme Court.^{90/}

Although there is a statutory procedure, this is not an exclusive procedure, and it has been held that abandonment of a water right upon which injunctive relief is dependent can be properly interposed in an action for injunction.^{91/}

Abandonments and forfeitures are not favored,^{92/} and cannot result if the nonuse of water was caused by facts not under the appropriator's control.^{93/} However,

"nonavailability, as well as other factors, not under the appropriator's control, is properly a matter of defense, and contestants . . . are not obligated to show availability over the period of non-use."^{94/}

As a general principle, forfeitures must be promptly asserted and, if not so asserted, they are waived. A wait of 16 or 17 years before bringing an action for abandonment, during which time the reservoir in controversy was twice repaired and use of water recommenced, was held to be an unreasonable delay in bringing an abandonment action.^{95/}

Initially, proof of abandonment was difficult because of the unavailability of discovery procedures to gain access to the lands. However, the Wyoming Administrative Procedures Act, which gives parties the same discovery powers as were available under the Wyoming Rules of Civil Procedures,^{96/} has cured this apparent defect.

Interstate Waters

Although the appropriative theory has been acceptable to the Western States on an intrastate basis,^{97/} states near the headwaters, which are higher in altitude and colder in climate, have a shorter growing season, and whose populations expand more slowly, have not been willing to apply this same theory on an interstate basis. In instances where rivers flow across state lines, and each state has developed a dependency upon the continued availability of that water for development, either present or future, controversies have been settled either by interstate litigation under the original jurisdiction of the United States Supreme Court, or by interstate compacts, negotiated and ratified by the individual states and approved by Congress.^{98/} In the Columbia River Drainage, Wyoming is subject to one compact.

The Snake River Compact^{99/} This compact concerns the Snake River and all tributaries flowing into it within the boundaries of Wyoming from its headwaters to the Wyoming-Idaho boundary and the Salt River and all its tributaries. Excluded from apportionment under this compact are:^{100/}

1. Existing and future domestic and stockwater uses (stockwater reservoirs shall not exceed 20 acre-feet in capacity);
2. Wyoming rights established prior to July 1, 1949.

The amount of water subject to allocation is determined by taking, in acre-feet, the algebraic sum of:

1. The Snake River flow as measured at the Idaho-Wyoming boundary.
2. The yearly change in storage in Wyoming for use in Idaho.
3. Storage water used in Wyoming with a priority date after June 30, 1949; and
4. One-third of the water (exclusive of storage water) diverted, under rights having a priority later than June 30, from the Snake River for use in Wyoming and from tributaries of the Salt River for use on lands in Idaho. After determining the sum of these four factors, 4 percent of the water is allocated to Wyoming and the remaining 96 percent to Idaho.

Wyoming is restricted from diverting water from the Snake River Basin without the consent of Idaho. Idaho is restricted from diverting water outside the basin of the Salt River except with the approval of Wyoming.^{101/}

FOOTNOTES

- 1/ 2d Annual Report of the Territorial Engineer 14 (1890).
- 2/ Article 8, Section 5, Wyo. Const.
- 3/ Ibid.
- 4/ Section 41-1.6, Wyo. Stat. (1957). (All section references are to the 1957 edition of the Wyoming Statutes as amended to 1967.)
- 5/ Article 8, Section 2, Wyo. Const.
- 6/ Section 41-211.
- 7/ Section 41-213.
- 8/ Sections 41-47 thru 41-53.
- 9/ Article 8, Section 2, Wyo. Const.
- 10/ Section 41-57.
- 11/ Section 41-61.
- 12/ Section 41-62.
- 13/ Section 41-63.
- 14/ Ibid.
- 15/ House and Cahill, Everybody's Guide to Wyoming Water Administration 11 (1967). (Hereinafter referred to as Everybody's Guide.)
- 16/ Ibid.
- 17/ Ibid.
- 18/ Id. at 12.
- 19/ Ibid.
- 20/ Ibid.
- 21/ Id. at 13.
- 22/ Id. at 15.
- 23/ Id. at 14.
- 24/ Id. at 16.
- 25/ Id. at 18.
- 26/ Id. at 17.
- 27/ Id. at 19.
- 28/ Ibid.
- 29/ Ibid.
- 30/ Id. at 17.
- 31/ Id. at 15.
- 32/ Session Laws of Wyoming 1890-91, Ch. 8, approved December 22, 1890. This law is currently found in Sections 41-201 to 41-216.
- 33/ Laramie Rivers Co. v. LeVasseur, 202 P.2d. 680 (1949); see also Campbell v. Wyo. Dev. Co., 100 P.2d. 124, 102 P.2d. 745 (1940).
- 34/ Section 41-201.
- 35/ Article 8, Section 1, Wyo. Const., declares that the water "of all natural streams, springs, lakes or other collections of still water" within the state belong to the state. Article 1, Section 31, Wyo. Const. states that the control of water "must be in the State, which, in providing for its use, shall equally guard all the various interests involved."

As to surface flow, this concept was found constitutional in Farm Investment Co. v. Carpenter, 61 Pac. 258 (1900). Although Wyoming has had a ground-water statute since 1947, the only case concerning its constitutionality was dismissed by the Supreme Court on procedural grounds. Bishop v. City of Casper, 420 P.2d. 446 (1966).

- 36/ Section 41-201.
- 37/ Article 13, Section 5, Wyo. Const.
- 38/ Section 41-205.
- 39/ State v. Laramie Rivers Co., 136 P.2d. 487 (1943).
- 40/ Scherck v. Nichols, 95 P.2d. 74 (1939).
- 41/ State v. Laramie Rivers Co., 136 P.2d. 487 (1943).
- 42/ Section 33-366. Provided, however, if the application is for a stock water reservoir of less than 5 acre-feet, the applicant or his agent may certify to the map submitted.
- 43/ Section 41-201.
- 44/ Diversion of water prior to the filing and approval of an application is a misdemeanor. Ibid.
- 45/ Whalen v. North Platte Canal & Colonization Co., 71 Pac. 995 (1903); Wyo. Hereford Ranch v. Hammond Packing Co., 236 Pac. 764 (1925); Laramie Rivers Co. v. LeVasseur, 202 P.2d. 680 (1949).
- 46/ Moyer v. Preston, 6 Wyo. 308, 321, 44 Pac. 845 (1896).
- 47/ Section 41-208.
- 48/ Section 41-215.
- 49/ Section 41-205.
- 50/ Article 8, Section 3, Wyo. Const.
- 51/ Section 41-203.
- 52/ Ibid.
- 53/ Section 41-206. C
- 54/ Ibid.
- 55/ Ibid.
- 56/ Ibid.
- 57/ Ibid.
- 58/ Ibid.; Attorney General's Opinion No. 45, dated September 22, 1965; Unnumbered Opinion dated May 8, 1968. See also Laramie Rivers Co. v. LeVasseur, 202 P.2d 680 (1949).
- 59/ Section 41-206.
- 60/ Section 41-211.
- 61/ Ibid.
- 62/ Section 41-176.
- 63/ Section 41-177.
- 64/ Section 41-179.
- 65/ Section 41-211.
- 66/ Ibid.
- 67/ Article 8, Section 1, Wyo. Const.
- 68/ Article 1, Section 31, Wyo. Const.
- 69/ Willey v. Decker, 73 Pac. 210 (1903); Merrill v. Bishop, 287 P.2d. 620 (1955); Lake DeSmet Res. Co. v. Kauffman, 292 P.2d. 482 (1956); Hunziker v. Knowlton, 322 P.2d 141 (1958).

- 70/ Quinn v. John Whitaker Ranch Co., 92 P.2d. 568 (1939).
71/ Willey v. Decker, 73 Pac. 210 (1903).
72/ Section 41-2.
73/ Ibid.
74/ Sections 41-3 and 41-4.
75/ Section 41-3.
76/ Ibid.
77/ Ibid.
78/ Ibid.
79/ Ibid.
80/ Article 1, Section 31, Wyo. Const.
81/ Johnston v. Little Horse Creek Irr. Co., 13 Wyo. 208,
227-28 (1904).
82/ Testimony of H. T. Person, given September 5, 1968, before
the State Board of Control, In the Matter of the Petition of
the City of Laramie for a Change to a Preferred Use,
Transcript, P. 8.
83/ Cahill, Industrial Water Panel, Wyo. State Bar Conv.,
September 12, 1968 (unpublished).
84/ Chapter 55, Section 14, Session Laws of Wyo. (1888).
85/ Chapter 39, Section 1, Session Laws of Wyo. (1905).
86/ Section 41-47.
87/ Section 41-48.
88/ Section 41-49.
89/ Section 41-50.
90/ Section 41-53.
91/ Louth v. Kaser, 364 P. 2d. 96 (Wyo. 1961).
92/ Sturgeon v. Brooks, 281 P.2d. 675 (1955).
93/ Scherck v. Nichols, 95 P.2d. 74 (1939); Ramsay v. Gottsche,
69 P.2d. 535 (1937); Horse Creek Cons. Dist. v. Lincoln Land
Co., 92 P.2d. 572 (1939).
94/ Hemenway v. Yentzer, 440 P.2d. 7, 13 (1968).
95/ Sturgeon v. Brooks, 281 P.2d. 675 (1955).
96/ Section 9-276.25 (h).
97/ Everybody's Guide 21.
98/ Ibid.
99/ Section 41-509
100/ Id. at Article II.
101/ Id. at Article III.

PARTICIPATING STATES AND AGENCIES

STATES

| | | | |
|---------|--------|------------|---------|
| Idaho | Nevada | Utah | Wyoming |
| Montana | Oregon | Washington | |

FEDERAL AGENCIES

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| Department of Agriculture | Department of the Interior |
| Economic Research Service | Bonneville Power |
| Forest Service | Administration |
| Soil Conservation Service | Bureau of Indian Affairs |
| Department of the Army | Bureau of Land Management |
| Corps of Engineers | Bureau of Mines |
| Department of Commerce | Bureau of Outdoor Recreation |
| Economic Development | Bureau of Reclamation |
| Administration | Fed. Water Pollution |
| Weather Bureau | Control Adm. |
| Dept. of Health, Education, | Fish and Wildlife Service |
| & Welfare | Geological Survey |
| Public Health Service | National Survey |
| Dept. of Housing & Urban | Department of Labor |
| Development | |
| Dept. of Transportation | Federal Power Commission |